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Farm Department.

Conducted by J. H. Brown, whose farm is conducted as the Michigan Farmer Experiment Farm. All correspondence for this department should be sent to Battle Creek, Mich.

THE EDITOR'S FARM NOTES.

LOOKING FOR FROST.

There has been no frost since the third week in September, and this was very light at our farm. Very seldom does frost hold off until the middle of October (this is the fourteenth) in this latitude.

We are waiting for a good, hard frost to kill the potato vines. Some of the vines have died from maturity, but a large portion are quite green and bulky yet.

During the last three weeks the potatoes have been growing right along, and some of the tubers are big enough to make a meal for a good-sized (?) family. This is no potato story either.

POTATO DIGGING TIME.

Years ago we used to dread the coming of this ordeal of digging with a hand hoe. The labor of picking up was light compared with the stooping over to pull the tops, digging a round, shallow hole, and extracting each tuber with a side flirt of the corner of the hoe blade.

The potato hook came next. Then the fork. For several years we have used a two-horse digger that suited our requirements very nicely for a small field or patch.

Now we are anxious to get into the field and try our new four-horse elevator digger. In fact, we tried it two weeks ago for about ten minutes. Then the vines completely covered the ground with a mat of green. The ground was quite stony; in fact, we picked out the stoniest part of the field, and a side hill as well.

THE DIGGER ALMOST HUMAN.

To say we were surprised mildly expresses our feelings. But two horses were attached, and the writer sat on the seat. We let the shovel down too low at first, taking up a pile of dirt and potato tops. But the team went straight through, and the potatoes and stones came down from the rear end of the elevator in a narrow row on clean ground.

As the tops were so heavy and green they clung to the potatoes, instead of being thrown to the left side by the pickers, as is the result when the tubers are ripe and the tops dead. Verily, this is the way to dig potatoes, and we shall be glad when we can sit on the seat and see the potatoes come up out of the ground. We are very busily engaged in State sanitary matters, but have arranged to assault this potato patch the last of next week, October 21-22.

CORN HUSKING.

This job is going on by spells as we find time to work at it. Help is scarce and not very energetic. Our man has all he can do to attend to the chores and pick up the corn. We are using the truck and bushel crates for this work.

We shall fire-dry the finest ears for seed, and this makes a large amount of extra work in sorting and transferring to the dry-house where fire heat is applied. We could not get along without bushel crates now, after using them for two seasons.

HUSKING BY THE SHOCK.

For years we have paid our huskers a certain price per shock. This is much more convenient all around, as it saves the extra time and labor of measuring the corn in picking up, and carrying baskets or crates part full of corn from one shock pile to another.

We pay from four to seven cents per shock, according to size and yield of ear corn. This season our corn is extra heavy, yielding three to three and one-half bushels of ears per shock, for which we pay seven cents. The men board themselves.

The shocks contain exactly 108 hills, cut six rows one way by eighteen the other. There are 29 shocks in each row the short way across the field. Each husker takes a row by himself, and then we have no difficulty in keeping tally.

HUSKING BY THE BUSHEL.

We used to pay a certain price per bushel many years ago. Then we had to pick up each man's piles separately, heap each basket, and sometimes carry three-quarters of a bushel from one pile to another, besides driving the team. A tally was kept on the wagon-box sideboard, and frequently we had no pencil, but used a nail.

Of course, sometimes this plan must be followed; but, with our even corn, we like the shock plan better. It certainly is more convenient and easier for us.

WINTER OATS.

B. B. Baker, Ingram Co., writes: "In answer to F. F. Kinney's inquiry, I wish to say that winter oats are not a success with me. Back in the '80's, the Department of Agriculture, Washington, D. C., sent me a package of winter oats. I sowed on warm, sandy land early in September. They came up fairly well, but did not make a large growth. In the spring not a single live stalk could be found. Later, I tried another package, sowed in October, which never came up. My experience with winter barley was the same."

Our advice would be to let winter oats and barley alone, except for experimental purposes. So far as forage is considered winter rye will answer all requirements for late fall and spring feeding.

CHEAP PAINTING MATERIAL.

I would like to ask you or any readers of The Farmer if you could tell us of some cheap material for the first coat on old siding. We sided over an old barn this spring that had a tool house on one end, and as the siding was good, but had never been painted, we wish to have it all look alike. As it takes up oil so fast, I take this opportunity to ask the readers if they can tell us of something cheaper than oil for the first coat.

Lenawee Co., Mich.

E. W. BEARS.

Our advice would be, use linseed oil and Venetian red, or yellow ochre, and

put on but one coat. This would be as cheap in the end as to try any other substitute.

We painted an old granary and tool house this summer, using but one coat. This was made up of mixed boiled and raw linseed oil, quite thickly mixed with a good quality of Venetian red. It makes the building look well, and is a fairly good preservative.

For The Michigan Farmer.

COMMERCIAL FERTILIZERS AGAIN.

55 Per Cent Profit on Wheat.

In The Michigan Farmer of August 20, page 117, I gave the results of a most carefully conducted experiment with commercial fertilizers on wheat. At the time of that writing it struck me that the best way of presenting the facts was to give the profit per acre. I accordingly summed up the results of the experiment in the following words:

"The 7½ acres unfertilized cut 223 dozen bundles, or 30 dozen to the acre, and threshed out one bushel of wheat to every 11½ bundles, or 232½ bushels, thrasher's measure, weighing 63 pounds to the bushel. This made the total yield by weight of the unfertilized strip 32½ bushels to the acre.

"The two acres fertilized cut 67 dozen bundles, or 33½ dozen to the acre, and threshed out one bushel of wheat to every 11 bundles, or 73¾ bushels, thrasher's measure, weighing 64 pounds to the bushel. This made the total yield by weight of the fertilized strip 39 bushels to the acre.

"It will be noticed that with the same size bundles it took 11 of the fertilized and 11½ of the unfertilized to make a bushel, and that with the same measures the fertilized weighed one pound more to the bushel. The financial account stands as follows:

Extra yield per acre, 6½ bu., at 65¢.....	\$4.25
Cost of fertilizer per acre.....	2.75
Profit per acre.....	\$1.50

From a somewhat voluminous correspondence which the publication of the above has brought to my desk I have learned that had I given the total profits instead of the profits per acre the results would have appeared far more strongly to my brother farmers. The following sentence from one of the best farmers in Jackson county is typical of more than one-half of the communications I have received on the subject: "The profit on commercial fertilizers as shown from your experiment is not so great as I should have expected. There is surely nothing remarkable nor worth troubling one's self much about in a profit of only \$1.50 per acre."

In order to save myself the time it would take to answer all these letters individually I wish to reply through the columns of The Farmer. Let us see what these figures mean. I invested per acre \$2.75. My profit per acre was \$1.50, or 55 per cent on the money invested. This may not be remarkable, but I will confess that in all

my farming operations of the past year I can not point to another investment that has yielded me 55 per cent net profit. And more than this, I am convinced that the immediately succeeding crops on this fertilized portion of the field will also show the effect of this one application. However, that is yet to be determined.

Had I applied the fertilizer to my entire crop of 52 acres with the same results it would have increased the yield from 1,613 bushels by weight to 1,938 bushels, and the net profit would have been very nearly \$100, for the cost of application of the fertilizer to the larger acreage would have been considerably less per acre. In these days of close competition and small profits, a good business man, be he farmer or otherwise, jumps at the chance to net 55 per cent on an investment.

Now, I am not by any means a commercial fertilizer crank. Business prudence has taught me to go slowly in any new investment, and notwithstanding the marked success of last year's experiment with 500 pounds of the fertilizer on two acres, I have this year applied it to only about one-seventh of my wheat acreage. I have sown 2,000 pounds on ten acres, and shall watch the effects next year as carefully as I have this, and report the results through The Farmer in due season. If the results are as satisfactory as those of this year, I shall conclude that the experimental stage is passed, and thereafter shall apply commercial fertilizer to my entire wheat acreage as long as the results are satisfactory. A number of my neighbors are also giving commercial fertilizers a first trial this year, and altogether we shall have a fair test on several different kinds of soil.

Oakland Co.

A. C. BIRD.

For The Michigan Farmer.

THE ARRIVAL OF THE WORST WEEDS KNOWN IN AMERICA.

(Concluded.)

THE BUFFALO BURR.

We shall first refer to the noxious characteristics of the Buffalo Burr (*Solanum Nostatum*), a species of nightshade of the same genus as our common potato. (Please take notice that there is no such thing as "Irish potato;" the only English name the potato legitimately possesses is potato, any other name is a false or fool name.)

In prickliness the Buffalo Burr probably even surpasses the Russian Saltwort, every portion above ground save the large yellow petals being covered with long, slender, very sharp spines. Like that plant, it is decidedly handsome, especially when in flower; were it not such a serious pest it certainly would be cultivated for an ornament, for its large yellow flowers are truly handsome.

The plant is very branching, sprawling flat on the ground, the stems becoming hard and woody. The leaves are large and lobed, something like

those of the watermelon, covered thickly with sharp prickles. After the showy yellow corolla drops off the very prickly calyx greatly enlarges, completely covering the berry, looking like a prickly burr, hence the name Buffalo Burr, the plant originally growing in the southwestern states where buffalo once abounded, and then being distributed by the burrs becoming fastened to the buffalo's shaggy coat and mane.

I do not consider this as serious a pest to Michigan as the Russian Saltwort, but, of course, to sheep raisers it is a far greater nuisance than that plant, as the burrs become fastened in the wool and are pretty sure to ruin it for manufacturing purposes.

This weed was introduced into Michigan in 1895 and 1896, in hay brought from Indian Territory. I have found several plants growing about Rochester, but it does not seem to flourish here, all the plants having a weak and sickly look, unlike the robust Russian Saltworts. Though it does not promise to be as bad here as in other states, it has such a character elsewhere that it should be carefully watched.

THE BURR GRASS, SAND BURR.

It is hard to tell whether the Burr Grass (*Cenchrus tribuloides*) ranks second or third among the worst weeds ever introduced into Michigan. With regard to the present, it ranks first among all the worst weeds of Michigan, for it has become thoroughly established in many parts of the State, while the other two are newcomers here, not yet well established.

This weed is a coarse annual grass widely sprawling upon the ground, rooting and branching at every joint, the branches well covered with its large, extremely prickly burrs. As a nuisance it far surpasses the crab grass, which is such a pest in Michigan. A single plant will densely cover several square feet, and be covered with those horrible burrs, which will stick to everything that passes by, be it one's clothing or the hair or wool of some animal, and no burrs have such a capacity for pricking as do these burrs. Where they abound they contribute much to make life miserable. When they get in wool they surpass the Buffalo burrs in evil characteristics.

The history of this grass is interesting. At the battle of Palo Alto, Mexican war, our soldiers encamped where this pest abounded and got their clothing and blankets full of these burrs. They carried them home, especially to Texas, Arkansas and Kansas. From these states this pest has become widely distributed. In 1895 it had reached as far north as Bay City, Mich.

Like many other weeds it is most commonly carried about by railroad cars, and spreads from the railroads. I first discovered this pest along the sandy shores of Lake Huron, at Caseville, Mich., August 2, 1887. About 1890, I found it along the Michigan Air Line, near Rochester, and a little later along the Michigan Central near Rochester. A section boss on the Air line carried some of the burrs in his clothing to his home in the northeastern part of Rochester and the grass still grows along the street in front of the house he then lived in. From the M. C. someone carried it in their clothing to the sandy lands some three miles southeast of Rochester, where it became well established, upon the discovery of which I at once notified the highway commissioner, who immediately took steps to destroy it. Nowhere does it flourish so well as on dry, sandy lands. On the sandy lands of Macomb Co., Mich., it has already become a tremendous nuisance. Nowhere have I found it so bad as on the Lambertson farm, east of Yates, Macomb Co., where it has spread from the Air Line. It literally covers most of the north farm. It is probably equally abundant elsewhere. When once established it is a terrible pest.

Hitherto the people of Michigan have often complained of bad weeds. Have repeatedly enacted laws to destroy them, but seldom enforced such laws. Instead of enforcing the laws and eradicating the Canada thistles, wild carrots, etc., they have quietly let these go to seed all over the State until they become thoroughly established, particularly the Canada thistle, which some fool farmers say does not produce seed, fool farmers for they themselves must suffer from such foolish notions, forgetting that the sole purpose of the flower is to produce seed, and anybody can see that the Canada thistle produces many flowers. I have examined many ripe heads of Canada

thistles and never, as far as I can remember, without finding plenty of seed in them, one or more at least in each head.

But, farmers, take due warning. If you do the same with any of the three weeds that I have been describing, particularly the Russian Saltwort, you will have three far larger elephants upon your hands than you ever before dreamed of, pests so serious that the Canada thistle cannot compare with them as a nuisance. And you had better do something mighty quick to head them off. Don't delay matters until they become established.

If you cannot identify these weeds yourself and you know of any botanist in your locality compel him to help you out. Of course, you ought to give him some compensation for helping you, that's only fair, for he has had to work hard to become a botanist and probably has been poorly paid for all of his hard work; but I must repeat it, these weeds must be eradicated at once, and if you cannot identify them yourself, compel the botanist to help you out, pay or no pay; of course, the fair way is pay. But, pay or no pay, you must have his help to fight these pests, so don't hesitate to seize upon the botanist and compel him to help you.

In conclusion, as a botanist, I see our grand old State invaded by three of the worst foes to agriculture that ever entered the State. If the farmer suffers it must affect all other classes, not because, as some claim, the farmer is the foundation upon which all other vocations build, but because all vocations, and all people, are inter-related and inter-dependent, and when one legitimate vocation suffers, all other vocations suffer. Besides, I was born upon a farm and lived seventeen years upon a farm, and am interested in farmers. I have not written this to advertise myself or any other botanist, but solely to advertise these most serious pests that have been so disastrous to agriculture in other states, and which to-day threaten to force themselves upon us, and will most surely do so if we do not at once arouse and drive them out.

You have been duly warned by one whose chief business is to study plants and become acquainted with their true character, and whose knowledge of these weeds causes him to foresee most disastrous results if the people of this State let them become established here as already have weeds of far more innocent character, such as Canada thistles and wild carrots and lance-leaved plantains, charlock, etc.

I wish to warn farmers, especially along the southern border of Michigan, to watch for a wild onion, introduced from Europe a few years ago, and which has reached Ohio, and is in some parts of the country a serious pest, especially affecting the interests of dairymen, as it spoils the milk of cows that feed upon it. It is regarded as one of the worst weeds to eradicate, as it spreads by seeds and bulbils from the top of the stem and also by each bulb multiplying like the English multiplier or potato onion. Will be found in the fields and along roadsides. Speedily report any wild onion you find in such places. Don't let it spread.

Oakland Co. W. A. BROTHERTON.

A WHITEWASH GONE ASTRAY.

Dear Editor:—Please help me to kill off this absurd and ridiculous blunder of a crazy printer. If anyone mentions "water brine" in your presence, "shoot him on the spot," and send the undertaker's bill to

Yours distressedly,

Mich. Exp. Station. R. C. KEDZIE.

The following letter is a sample of those which have been annoying Dr. Kedzie for some months past, the increasing number of which has induced him to make the above request. We trust that exchanges which so generously published the formula in its erroneous condition will now take pains to correct the error:

New Orleans, La., Sept. 27, 1898.
Michigan Agricultural College.

Gentlemen:—Having read an article in which Prof. Kedzie advises and urges the use of a paint or wash made of skimmed milk and water brine, as a preventive of fire, and desiring to give the same a trial, I would be very thankful for directions how to prepare the same.

C. J.

In explanation Dr. Kedzie says: About twenty years ago I published a formula for a cheap and permanent whitewash for outbuildings, board

fences, etc., which is more durable than ordinary whitewash, and to some extent can be used in place of paint.

Take water lime and skim milk, making a mixture of the consistence of ordinary whitewash, and apply with a brush immediately, or before the water lime sets. Color with any paint to secure the tint desired.

This was printed in many papers, but by and by a fool printer changed the words water lime to "water brine," and this absurd formula has been floating into the papers ever since. Every month I receive letters asking for an explanation of how to use "skim milk and water brine." The above is the last one received.

TURNIP GROWING TO PERFECTION.

From our Special English Correspondent.

I am certain that there is no reader of The Michigan Farmer who has not heard tell of the famous root crops which English farmers raise every year. In fact, I have seen it stated a dozen times in American agricultural papers that the quality of English mutton is largely produced by turnips, fed liberally to the sheep in winter. This is to some extent correct, and I want to place before readers of The Farmer a few facts on this important subject.

Among the various teaching institutions whose work has been duly recognized by the board of agriculture and duly appreciated by the country, there is none which has done more or better work than the Glasgow and West of Scotland Technical College. In Scotland at least the agricultural department of the college, headed by Prof. Wright, holds a unique position in regard to a record of extensive and thoroughly efficient work. Instead of resting content with conducting in the college classes for instruction in agriculture and the allied sciences, Prof. Wright and the other members of the agricultural teaching staff have strained every nerve to bring technical education home to Scottish agriculturists by conducting special classes for farmers and farmers' sons in the dead of winter, when farm work is slack, by delivering courses of lectures to farmers in numerous counties in Scotland, and by conducting important agricultural experiments in the numerous counties that come within the sphere of their operations. These facilities for receiving instruction in the science of agriculture and applying these scientific principles in everyday farm practice have been greatly appreciated by the farmers in the western and southern counties, and Prof. Wright's annual report on the results of the experiments conducted under his own personal supervision is always read with the keenest interest by the agriculturists of Scotland.

The extent and usefulness of the teaching and experimental work conducted by the agricultural staff of the Glasgow Technical College have also been fully recognized by the Board of Agriculture. Indeed, it is an open secret that last year, when the board's inspector was visiting the various centers of agricultural instruction and experiment in Scotland, he plainly intimated to the grant-receiving bodies in Edinburgh, that unless they took a leaf out of Prof. Wright's book and brought themselves more in touch with agriculturists by conducting special classes for farmers, by delivering extension lectures, or by conducting agricultural experiments on farms in the eastern counties, it might come to be a question whether the grant would be continued to them. The many farmers in Scotland who closely followed the Professor's experiments last year and watched the results are well aware that his forthcoming report will contain some very interesting matter with respect to the manuring of crops, notably the turnip crop. Turnips and potatoes—particularly turnips—remove a much larger amount of fertilizing matter from the soil than any other crop which the farmer grows. Hence arises the generally-adopted practice of applying to the green-crop "break" the greater part, if not the whole, of the farmyard manure produced on the holding in the course of the year. In connection with this practice there is one important point on which his experiments last year gave very decisive results. Some prominent teachers of agricultural science have been inclined to hold that when a dressing of farmyard manure has been applied to the land it rarely if ever pays the farmer

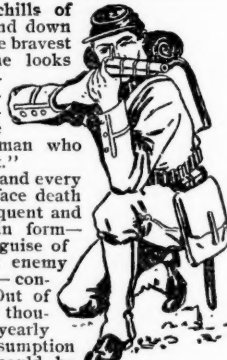
to apply a dressing of artificials along with the farmyard manure. This point was very fully tested by the Professor last year, when he conducted a series of experiments on the manuring of turnips on eleven different farms situated widely apart from each other. On each of these farms thirteen plots of equal size were laid out, and were all, with the exception of two, manured with different manures, the remaining two plots being the "no manure" plots, answering to zero. On the eleven different farms the average produce of roots per acre on the one unmanured plot was 9 tons, 11 3-4 cwt., and on the other unmanured plot the yield was 9 tons, 13 1-2 cwt., so that the yield on each of the "no manure" plots was very uniform. One plot received a dressing of 10 tons per acre of farmyard manure, and on this plot the average yield of roots was 17 tons 4 1-2 cwt. per acre, thus showing a large and profitable return for the manure applied, apart altogether from the fact that a large proportion—probably one-half—of the fertilizing matter applied to that crop would be left in the soil for the use of the succeeding crops. The adjoining plot also received a dressing of ten tons of farmyard manure, and this dressing was supplemented with 4 cwt. of mineral superphosphates, with the result that the average produce of roots on this plot was 21 tons 11 1-2 cwt. Thus the addition of 4 cwt. of mineral superphosphate, costing some 12s. or \$3 in all, resulted in an increase of over 4 tons of roots as compared with the adjoining plot, which was similarly treated in every way except that it got no artificials by the way of supplementing the 10 tons of farmyard manure. In fact, the plot which got 10 tons of dung and no artificials produced a smaller average crop than any of the manured plots, though in case of the eight plots manured with artificials alone the cost of the fertilizers used in no case exceeded 33s per acre. The relatively small return obtained by the application of 10 tons of farmyard manure alone is doubtless due to the fact that the fertilizing substances in the dung are not so readily available for the use of the plant, and therefore are not so well adapted for pushing forward the plant in the earlier stages of its growth as a soluble, artificial manure is. Anyway, the Professor's experiments have made it clear that the common plan of giving a suitable dressing of artificial manure in addition to farmyard manure is as fully warranted by scientific experiment as it is by everyday experience.

(Concluded next week.)

The cold chills of fear run up and down the back of the bravest man when he looks down the barrel of a death-dealing Winchester in the hands of a man who means "shoot."

Every hour and every minute men face death in a more frequent and equally certain form—death in the guise of that deadliest enemy of mankind—consumption. Out of all the tens of thousands who yearly die from consumption 98 per cent. could be saved. Dr. Pierce's Golden Medical Discovery is an almost unfailing cure if taken in the earlier stages of the disease. It will cure consumption and all allied diseases, as bronchial, throat and nasal affections. It cures by going to first principles. A man's body starves a long time before consumption attacks him. The tissues of his lungs starve for lack of sufficient nourishment. They become inert and half dead and then are attacked by the bacilli of consumption. The "Golden Medical Discovery" restores the long-lost appetite; it strengthens the weak stomach and corrects the impaired digestion; it promotes the flow of digestive juices and facilitates the assimilation of the life-giving elements of the food into the blood. When the blood is pure and rich, old inert tissues are torn down, carried off and excreted, and new, healthy, muscular tissues replace them. It allays inflammation of the mucous membranes, soothes the cough, facilitates expectoration, and deepens the breathing, supplying the system with a much needed stock of oxygen. It drives out all impurities and disease germs. Medicine dealers sell it.

"I was first taken nearly two years ago with choking and aching in my throat," writes Mrs. D. Z. Moore, of Denning, Grant Co., N. Mexico. "I took everything I could think of and spent a great deal of money. Three doctors treated me. My throat ulcerated and I lost my voice. I could scarcely talk. The doctors called the trouble bronchial affection, and said the larynx was badly affected. I was almost dead with consumption. My neighbors thought I would not live a month. I began taking Dr. Pierce's Golden Medical Discovery. From the first, I commenced to improve and now have as good health as ever. I owe my life to Dr. Pierce."



Live Stock.

CONDUCTED BY ROBERT GIBBONS.

Address all correspondence to Michigan Farmer, Detroit, Mich.

For The Michigan Farmer.

A SHIAWASSEE SWINE BREEDER.

I recently made a call on Mr. E. M. Eighthme, of this county, an enthusiastic breeder of Poland-Chinas and one of The Farmer's advertisers. I have seen his stock on different occasions, but had never given them a thorough inspection, and consequently was not disinclined to improve the opportunity to look them over.

He is a thorough stockman, and is devoting his attention to swine, making the Poland-China a specialty. Any one at all interested in hogs will not find him at all adverse to branching out on the subject, and if it so happens that the other party can talk good Poland-China doctrine, the circumstances are doubly fortunate. Like the great majority of breeders who have devoted considerable time and attention to some particular breed, and have come to thoroughly understand its characteristics and the environments to which it is best suited, he is an ardent supporter of this particular specialty, and believes it equal to the best as an all-round farmers' hog.

A visit to Mr. Eighthme's farm is interesting not only from the fact that one is able to see good specimens of the Poland-China, but one is also given an opportunity to study the different types of the breed. I think that there were in the yards when I called members of three distinct families, illustrating types as they are bred by different breeders. There were the short, blocky specimens; what one might call an intermediate, and lastly, the long-bodied, medium-boned type. Mr. Eighthme is strong in his praise of the latter, and, judging from his reasons, together with the evidence displayed, I could not help but feel that he had considerable grounds for his opinions. My ideal type of hog has been the short, blocky frame, and have never been an admirer of the long-bodied and consequently long-nosed stock; but in looking at his drove I could not help but think that some of my theories were a little shaken. He pointed out two pigs, each representing an extreme, and which had received equally good care as far as possible to give them; the short, blocky one was farrowed March 22, and the long-bodied one nearly a month later; but on September 1 the latter exceeded the former in weight by some 29 pounds. If this should prove a fact in all cases, and I do not know why it should not, there would be but little indecision in my mind as to which type would be the more practical for the average farmer. The blocky type seems to have an advantage over the other. The former seems to be the favorite in the show ring, where the latter is not as common. The first seems to be a natural born show pig, as it is what might be called in exhibition shape all of the way up, while the long-bodied type is not in good showable condition, comparatively, until it is well along towards maturity. In looking over the herd, Mr. Eighthme pointed out one thrifty shoat which, he informed me, he was going to make into a 600 pounder in what seemed to me a remarkably short time; I hardly dare venture to give the time, but it seems to me as I remember it that it was at six months old. This pig was of the long-bodied type, which is his favorite.

I could not help but be a little interested in Mr. Eighthme's management and yard arrangement. He is evidently a firm believer in the colony plan. His farmyard is excellently arranged for several yards, so that the herd can be well divided, being nearly as convenient and doubtless much more to the advantage of the hogs, and especially the growing pigs. For one who is raising swine for market, and for that purpose solely, I have no doubt that the common method of keeping all under the same roof will be found in many respects more advantageous, principally in saving room and economizing time and labor in caring for the stock. But where one has the market value in mind only in a secondary way, and is handling them principally for breeding quality, and consequently is anxious to bring out those points that are indications of a well-bred hog and a good breeder, it is reasonable to suppose that the colony plan will be much better, though it

may require a little more time and labor in caring for the different yards. One can not expect to produce a good quality of breeders that will be capable of proving themselves equal to the severe competition that is everywhere in evidence wherever the Poland-China is at all known.

Owing to the fact that the brood sows and the various litters are kept in different enclosures, it is of course necessary that shelter of some kind be provided. I was very much impressed by the small houses that Mr. Eighthme uses. They are made for the sole purpose of the hogs' use, and are constructed with due regard for the purpose and economy. I should judge that they were about five and a half or six feet square; five feet high in front and three feet in the rear. The sides are covered with grooved siding, carefully laid so that they are as near windproof as it is possible to make them. The roof is composed of a good quality of matched stuff and is laid single. All of the outside surface that is at all exposed to the weather is thoroughly painted, and, especially, the roof, which is very important. There is no floor whatever, depending entirely on the ground. As Mr. Eighthme is situated on high, gravelly soil, there is little or no trouble from dampness that would naturally arise from a moist soil. The secret in using these sheds successfully is in having them as near air-tight as possible, so that there will be no danger of a current. One of the strong points for these sheds is the comparative cheapness of construction. I believe Mr. Eighthme informed me two could be easily made for \$5, and the builder can count in his time.

C. P. REYNOLDS.

A LIBERAL PROPOSITION.

There is no article that the live stock raiser needs more than a thoroughly effective, safe insecticide that will rid horses, cattle, swine, sheep, dogs, and poultry of the many forms of vermin that infest them. Ticks, scab, lice, fleas, mange, etc., retard growth, destroy flesh, wool, and egg production, and what is more, destroy the profits the raiser expects. From actual tests and much reliable information we can positively recommend Zenoleum as the safest, most economical and most reliable remedy that we know of. It is prepared by the Zenner-Raymond Co., of Detroit, Mich., who have spent many years in scientific experimenting and a vast amount of money to perfect the formula of Zenoleum, which must certainly have an immense sale as soon as its merits become known. To allow our readers to test its value the Zenner-Raymond Co. agree to send a quart of Zenoleum actually free to any Michigan Farmer subscriber who will write for it and agree to pay transportation.

STOCK NOTES.

The scarcity of meat in Germany, as the result of the restrictions on imports, has become so marked that horses and dogs are being substituted for cattle and hogs. The use of home meat has increased very rapidly in the small villages, and "young fat dogs" are being advertised for sale. Among the poorer classes a virtual meat famine exists.

The Cincinnati Price Current tells of a Mr. Charles Davis, of that city, who was engaged in the packing business in that city 60 years ago. He is now 89 years old, and still enjoys fair health. He is one of the men who made Cincinnati the center of the pork packing trade. He has lived to see great changes in the business, and its growth to gigantic proportions.

L. F. Conrad & Son, of Wacousta, proprietors of the Crescent herd of Poland-Chinas, managed to carry off five first, two second and four third premiums at the State Fair. They also secured the premium on herds, the herd consisting of boar one year old, sows two years old, one year old, under one year and over six months. Seventeen herds competed for this prize. The Crescent herd has been a feature at every State Fair since 1891.

The National Live Stock Association has issued a bulletin on the movement of cattle and sheep on western ranges, from which we take the following extract: "The greatly discussed shortage of range cattle has manifested itself beyond doubt, principally in the northern and western sections, where shipments will show a falling off from last year's record of

from 10 to 15 per cent. The heaviest decrease is in aged cattle, three years old and over, of which class there is an actual famine in some sections. Young cattle are also not as plentiful in the range sections as last year, but the territory covered by Kansas, Nebraska and South Dakota reports a large increase, hardly enough, however, to make up for the decrease in the west and north. The percentage of range cattle that will go for feeders this year is considerably less than usual, owing to the good feed that has prevailed on the range and the strong demand for beef cattle. Most of the markets report a good percentage of arrivals fit for beef, and for the first time in some months the range steer is worth more for beef than as a feeder to be finished on corn."

A Kansas cattle breeder claims to have evolved a new breed of cattle, which he calls the "Kansas." It is said to come from a cross of Hereford bulls upon Shorthorn cows, which finally developed a bull calf three-quarters Hereford and one-quarter Shorthorn, and hornless. This he bred back on Shorthorn cows, and then bred back to Hereford bulls again, until he has a herd of polled, or hornless, cross-breeds. According to him they have all the good points of the Shorthorn and Hereford with none of their bad ones. It is therefore the most perfect beef breed in the world, according to his views. They feed like Herefords, milk like the best Shorthorns, and are expected to run out both their progenitors. There is a great future for them according to their breeder.

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SHORTHORNS FOR SALE.

THURSDAY, NOV. 10th, 1898.

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PUBLIC AUCTION,

At Haddington Stock Farm, Ionia, Mich.

The herd comprises 40 registered females and 10 registered males of the following high bred families: Aldrie Duchess, Oxford, Cambridge Rose, Peri, Young Mary and Lady Elizabeth. Your attendance at this sale is most cordially invited. For particulars and catalogue of breeding, address N. J. STEELE, HADDINGTON STOCK FARM, IONIA, MICH.

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Three miles north of Swartz Creek, on the C. & G. T. R. R., and seven miles west of Flint, commencing at 10 o'clock a. m. The sale will consist of 25 choice registered Lincoln Rams, Lambs and Yearlings. A number of them are prize-winners. Also 50 choice registered Lincoln Ewes, from lambs to four years old. A number of them took prizes at every place shown, and are as good individuals as there is in the country. The sale of sheep will commence at 1 p. m. Fifty grade ewes will also be disposed of. S. W. BEAL, Proprietor. PETER CARTON, Auctioneer.

Auction Sale of H. F. Cattle

At Gilmore's 10c. Barn in Howell, Nov. 10th.

Some grand Holstein-Friesian Cattle, cows and heifers, fresh and soon due. A few choice young bulls from A. R. stock. Sale positive. Send for catalogue now. R. C. REED, Box 500, Howell, Mich.



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NOTICE what the Poland-China breeder, J. W. Bush, of Wacousta, Mich., says of a yearling Aberdeen-Angus bull which I selected for him; "Chesney is a very fine animal. I do not regret the \$115 in the least, because he is the best bull in this country. Thank you very much for him." Speak quickly for the **FIVE BULLS FOR SALE FROM SAME SIRE, CHEAP.** CLOVER BLOSSOM FARM, Port Austin, Mich.

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THE TRANSYLVANIA STAKES.

The rainy weather prevented the race for the Transylvania Stakes taking place until Monday of last week, when nine horses showed up for the start. The field was a good one, embracing John Nolan, Eagle Flanigan, Grattan Boy, Bingen, Dione, Pilatus, Caracalla, Belle J., and Cut Glass. It was as fine a field as ever started for these stakes, and the contest was extremely hot. Bingen and Nolan were the favorites in the betting, but the former got second place in the first heat, and never was prominent afterward. The first heat went to Eagle Flanigan in 2:07½, with Bingen second and Dione third. In the second heat Eagle Flanigan and Grattan Boy had a hot fight in the stretch, and the latter won in 2:08, Flanigan second and Dione third. Nolan was again in seventh place. When the start for the third heat was made, the driver of John Nolan evidently thought the best horses were a little tired, and that his time had come. He went for the heat, and won by a length from Grattan Boy and Pilatus, who finished in the order named. Time, 2:08½. Nolan won the fourth heat in 2:09½, in a whipping finish with Pilatus and Eagle Flanigan. The fifth and deciding heat was trotted just as dusk was coming on. Grattan Boy, Eagle Flanigan and Pilatus alternated in the lead until the three-quarter pole was reached, when John Nolan joined issue with them and in a driving finish, every horse under the whip, four horses finished heads apart, with John Nolan a winner after the fastest five heats on record. It was the greatest race ever trotted for the Transylvania.

One of the stories told about the race is that Foote laid up the first heat with Nolan, and in the second the gelding made a bad mistake at the three-quarters and he ran all the way in to save his distance. Foote never made an effort to get the horse squared away, and the judges overlooked the long run and allowed him to start. Several of the drivers entered protests, but the men in the stand could only see it one way. He was steady as clockwork in the third heat and in the stretch beat out Pilatus and Bingen without any trouble. Nolan won a good race, but the Hubingers were very lucky in having judges in the stand that would allow a driver to run a horse over a quarter of a mile to save his distance, and especially in the Transylvania. The stakes were valued at \$5,000.

On the same day the Michigan horse Pilot Boy, by Pilot Medium, won in the 2:08 class trotting, against such good ones as William Penn, Rilma, Captain Jack, Tommy Britton, Kentucky Union and Dan Cupid. Penn got the first heat in 2:11½, Pilot Boy second and Tommy Britton third. The second heat went to Rilma, with Captain Jack second and William Penn third. Then Pilot Boy went on and took the next three straight. The time was 2:11½, 2:11½, 2:09½, 2:09½, 2:10½. Rilma was the favorite before the start, but the grey gelding easily out-footed her when his driver sent him ahead. William Penn was the contending horse in the last heats.

THE MODEL DRAFT HORSE.

Perhaps there is no one in the country at the present time who is more competent to describe what the model draft horse should be than Alexander Galbraith. The draft has been his study for years, and he has been importing or breeding them for the greater part of his life. When, therefore, he draws a pen picture of what the draft horse should be, it is worth while giving it consideration, for it is certain to contain some excellent ideas for those interested in that business. Below we give an article written by him for the Stock Journal on this subject:

I will try to give as accurate a description as possible of what is considered a model draft horse in the markets of Chicago, New York, and other large cities at the present day.

The main difference between the American and the European idea is that in Europe they demand a horse of at least 2,000 pounds, whereas with us 1,800 pounds is about as heavy as

there is any call for. It may be that through course of time and with an increasing congestion of traffic on our crowded streets, we may yet come to want still heavier horses than we do now, but it is safe to say that for many years to come a well made horse of 1,800 pounds will always be considered very desirable for city traffic and command a good price in the market.

As regards height I would recommend 16 hands up to 16½ hands. Horses of 17 hands and over are almost invariably leggy and therefore not so suitable for draft purposes. The man who described such horses as being "too near heaven to be of any use on earth" had a lively appreciation of the necessity of having them close to the ground and therefore near to their work. For carriage, or road, or light draft purposes a greater length of leg is desirable than in the heavy draft horse.

As regards color I may state that, with the exception of light grays, all other colors are almost equally good. Brown, bay, black, chestnut, sorrel, roan and dark gray all are good, and it makes no practical difference whether they have white legs and faces or not. Gray colors used to be quite popular, but of late years the buyers have discriminated against gray horses on account of their tendency to get early white and old looking, as well as being much more difficult to keep clean.

The head of the draft horse should be a fair size in proportion to the weight of the animal. "There is a craze for pony heads and very short ears. This is a mistake. If you purchase a colt with a very small head and ear you will almost inevitably find to your loss that when matured you have only got an under-sized animal of comparatively little value. Both head and ear, as already stated, should be of medium size with considerable width between the eyes. This is a sure indication of brain power, and taken in conjunction with the eye itself is by far the most important part of the head.

See that the eye is clear and full, standing out so that, as the Englishman says, "You can hit it off with a stick." The eye should express vigor, intelligence and a good disposition.

The crown of the head should not be so wide as the forehead—wide crowned horses are frequently of stubborn disposition and the ears are apt to be low set and hung heavily. Everybody likes to see a brisk up-turned ear, and it should also be decidedly active. The face should be flat—not dished out like the Arabian horse, nor yet too full or Roman nosed, although the latter fault is the less objectionable of the two. The nostrils should be wide to admit of the utmost freedom in breathing, the jaws well developed but not abnormally large, the throat-latch as clean as possible, the neck strong, well muscled and of good length and well arched onto the shoulders, which should be powerful and well sloped backward so as to allow freedom of action in front.

Horses with upright shoulders are seldom good movers, and for riding purposes are simply intolerable. Let the chest be wide and deep, thus giving plenty of room for lung power, but see that the front legs are set right under and not on outside of the shoulders. Many wide-chested draft horses are poor travelers for the simple reason that their front legs are not properly placed under the shoulders, so that in walking or trotting they are inclined to paddle or throw out their front heels. This is a bad defect and should be carefully avoided.

The model draft horse should be very thick around the heart, his ribs well sprung from the backbone and coming well down in flank—no slab sides or herring guts. The coupling should be short, the loin strong, the hind quarter long and level, with the tail set up pretty high, the arms, thighs and second thighs particularly strong and heavily muscled. This for the special reason that herein lies the propelling power of the draft horse. If he is weak in his loins or thighs—no matter how perfect in other parts—he cannot be a powerful draft horse.

The hocks are the most important joint in the horse and therefore should receive from the breeder the most critical attention. They should be broad from a side view and perfectly clear of all tendency to fullness, or fleshiness, or any unsoundness, such as spavin or curb. Many otherwise excellent draft horses are rendered virtually useless by defective hock joints. They must not only be free from actual de-

fects, but also from such conformation as might, under severe straining, produce any defects or blemishes. The canon bones should descend perpendicularly from hock to pastern and from front knee to fetlock joints. The bones must be ample, as light-boned draft horses will not stand the tear and wear of heavy city work.

The muscles and sinews should stand out prominently, giving the bones a "razor-shaped" look, flat, clean and cordy. The knee lids should be broad, the pasterns of good length and sloped well forward, with the object of obviating or lessening the natural concussion on the hard streets.

Beware of crooked or curby hind legs and short steep pasterns. Those are about the worst kind of malformation, and ought instinctively to be avoided.

The feet should be of good size, with fairly wide hoof heads, the texture as tough as possible and the heels prominent and deep. Remember that a perfect foot, both as to shape and quality, is a sine qua non in the model draft horse, and probably a larger number of heavy draft horses are seen on our streets with defective feet than any other kind. This results very largely from defective shoeing or carelessness in over-feeding. Avoid shallow, flat, brittle or abnormally small feet, contracted heels, ringbones and sidebones.

The model draft horse should be full of vitality, carry himself gaily and cheerfully, and should walk and trot freely and squarely.

In walking, a long, swinging, easy rapid gait is most desirable, and he must neither turn his toes out nor in, but go straight forward. He must keep his hocks pretty close together—straddling is very objectionable in a draft horse for the reason that he loses a great deal of his power when the hind legs are not properly under the body and in perfect control.

Wide hind action is all right in a fast trotter or a hunting horse, but in a draft horse or a carriage horse it is simply unpardonable.

At each bend of the knees and flex of the hocks the sole of the foot should be turned up so as to be easily visible from behind.

HORSE GOSSIP.

The 2:11 class, won by Bingen at the Louisville meeting, was the fastest six-heat race ever trotted, displacing that won by Grace Hastings at Cleveland last year. The average time in this race was 2:10½; the average of Bingen's is 2:07-12.

The sale of thoroughbred yearlings sent to England by J. B. Haggin for that purpose, came off September 29th. It was held at Newmarket, and attracted a large crowd. The 42 head brought \$36,250, an average of \$863 per head. The highest price paid was for a full sister to Tournament, a bay filly by imp. Sir Modred out of Plaything. The result of this sale was so satisfactory that we may look for other breeders of thoroughbreds to follow Mr. Haggin's example.

Tennessee has produced many great pacers, but the latest one to attract attention by his speed is the three-year-old colt Prince Wilkes. At Springfield the colt won the 2:20 class and stepped the last mile in 2:15½, his driver jogging from the eighth mile to let the field inside the distance flag. Prince Wilkes has worked a mile in 2:06½, last half in 1:00, with the final quarter of the mile in 28 seconds. This performance is said to have been made at Paris, Tenn., and is stated to be authentic. Prince Wilkes was sired by Captain Cook and his dam was Etta Wilkes, by Denver Wilkes.

Tod Sloan keeps up his record as the greatest winning jockey now riding in England, a country supposed to have the best jockeys in the world. Friday of last week he rode three winners at Newmarket. The first one was in the Southfield plate for three-year-olds and upwards, the Middle Park plate of 500 sovereigns, and all-aged selling plate. Two of the wins were for the Lorillard-Beresford stable, which seems likely to lead all others this year in the number of its victories, and largely through the riding of Sloan. The jockey has become very popular among English race-goers.

There is great promise for the breeders of trotters in the prices realized at the public sales this fall. The Woodward & Shanklin sale closed at Lexington, Ky., on Saturday of last week. It was well attended, and the 44 head

offered realized \$15,835, an average of \$355.55 per head. The highest priced animal was the two-year-old colt Blennerhassett, by Onward, dam Glean by Dictator, which brought \$3,300, and went to B. Tappen, of Vienna, Austria. Quite a number brought from \$1,000 to \$2,750 per head, but of course there were a large number that ranged from \$40 to \$150 per head.

A "horse" editor evolves the following regarding the colt Blennerhassett, purchased for export to Austria: "Austrian buyers paid \$3,300 for the two-year-old colt Blennerhassett, full brother to Rex Americus, 2:11½, at the auction sale of Woodward & Shanklin at Lexington Saturday. The colt was bid in by B. Tappen, of Vienna, and will be shipped across the water with the balance of the purchases at the big sale. Blennerhassett is by Onward and his dam by Dictator, giving him that rich breeding that has produced so much extreme speed, and it is said that the colt is one of the most promising race horses ever sold in an auction ring." The statement that this colt is a full brother to Rex Americus, being by Onward and out of a Dictator mare, will make "Pa" Hamlin grin, and when he sees one journal after another giving it currency, he will wonder if he really does know anything of the breeding of his own horses.

At the Lexington meeting on Friday of last week, the 2:08 pacing class, purse \$1,500, had eleven starters, the most prominent of which were Directly and Lady of the Manor. Directly was the favorite at prohibitive odds, selling at \$250 against \$60 for the field. He won the first heat in 2:05½, the fastest of the race, with the Lady of the Manor crowding him to the wire. In the second heat, Directly broke at the word and fell a hundred yards behind, but his driver drove for the heat nevertheless, and finished fourth, Lady of the Manor taking the heat in a drive from Giles Noyes. Directly's hard drive in the second heat told on him, but he succeeded in landing the third by an eyelash from Lady of the Manor, who took the fourth and fifth heats, with something to spare, from Indiana. Directly being completely done for, Lady of the Manor is by Mambrino King, and was driven by Ed. Geers. Directly got second money and Indiana third. Five heats were paced, and the time was 2:05½, 2:09½, 2:08½, 2:10½, 2:09½. It looks as if Directly was not driven with good judgment, the first three heats practically using him up. It was a terrible dump for his backers.

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PRODUCTION OF WOOL IN THE UNITED STATES.

The National Association of Wool Manufacturers has prepared its annual report on the wool clip of the United States for 1898, and we are in receipt of advanced sheets of this very interesting report. The figures of production and weight of fleece given by States, and the estimates of pulled wool seem based upon as good data as possible to obtain. Figures compiled by the United States Department of Agriculture are given by way of comparison, and the whole furnishes as good an exhibit of the condition of wool growing as can be obtained from any available source. We give some tables and extracts from the remarks of the compiler. The table below is an estimate for the past eleven years of the production of wool in the United States, including fleece and pulled wools, washed and in the grease:

	Pounds.	Decrease.	Increase.
1888.....	301,876,121	233,829	
1889.....	235,779,479	6,096,642	
1890.....	309,474,856		13,699,377
1891.....	307,401,507	2,073,349	
1892.....	333,018,405		25,606,898
1893.....	348,538,138		15,519,733
1894.....	325,210,712	23,327,426	
1895.....	294,296,726	30,913,986	
1896.....	272,474,708	21,822,018	
1897.....	259,153,251	13,321,457	
1898.....	266,720,684		7,567,433

Regarding pulled wool the report says:

"The estimate of the pulled wool of the year has been revised in accordance with the information received from the largest wool pullers in the country, and we invite attention to the extracts from their correspondence printed herewith. We are satisfied that the rule adopted in Great Britain for estimating the pulled wool product of that country is fairly applicable to the United States. It is found there by long experience that the number of sheep and lambs slaughtered in an average year is about one-third of the total flocks, and that the average weight of the fleece is three pounds. A similar rule applies here, except at periods when the flocks are abnormally declining, as was the case under the free wool tariff. The census returns of 1890 and the best information attainable lead to the conclusion that 35 per cent. represents very fairly the ordinary additions to the total flock. When the flocks are increasing the amount of pulled wool is decreasing. The average weight of our pulled wool fleeces is estimated by Swift & Co. at 2½ pounds brushed, and by Armour & Co. at 3½ pounds unbrushed, as shown by their actual experience. Combining their results with others, we have adopted three pounds as an average weight for the present year, and thus get a total pulled wool product of 36,860,619 pounds, the average shrinkage of which we estimate at 40 per cent."

The following table represents an approximate estimate of the available supplies of wool for 1898:

	1897	1898.
Wool clip of the year.	259,153,251	266,720,684
Domestic wool on hand		
January 1.....	123,588,080	127,205,000
Foreign wool on hand		
January 1.....	26,844,000	49,581,000
In bond January 1, 1898		21,862,514
Foreign wool imported		
January 1 to July 1..	292,983,097	68,938,927
Total.....	702,568,428	537,309,125

Referring to the above figures the report says:

"The data of available supplies above given necessarily omit one important element—the supplies on hand in manufacturers' warehouses, purchased in anticipation of the rise of prices. This concealed supply was larger last year than ever before in the history of the industry—the reduced consumption of 1897 having been accompanied by enormous imports prior to the re-imposition of the wool duty. These concealed supplies of last year are not yet exhausted. The condition of the goods market for the last six months has not been such as to expedite their consumption, or to materially reduce the visible supply."

Upon another important point to flockmasters, the supply and demand for the various grades of wool, the report says:

"The most important phase of the general wool market is the accentuated diminution of the fine wool supply, re-

sulting from the world-wide change in breed that has been in progress for ten years or more. The users of fine wools are beginning to fear the possibility of a famine in the Merino stocks, as the outcome of this remarkable transformation. The clip of the Argentine Republic has been most strikingly affected by the wholesale abandonment of Merino for the crossbred; but the consequences of the change in that country are accentuated by the continued shortage in the Australian clip. In 1890 the Argentine clip was 300,000 bales, 95 per cent. of which was Merino; in 1898 the Argentine clip is 500,000 bales, 75 per cent. of which is crossbred. Here is a shortage of 160,000 bales of fine wool from Argentina, comparing 1898 with 1890. The Australian clip of 1896 was 134,000 bales short of the maximum supply (1894) from that country, the clip of 1897 245,000 bales short of the maximum, and the clip of 1898 is again short of the clip of 1897, making a net loss of at least 350,000 bales from the maximum supply of that country, all but about 25 per cent. of which can be reckoned as Merino. Reckoning the Argentine bale as 2½ times the Australian, we have a total loss of about 750,000 bales of fine wool (on the basis of the Australian bale) from the maximum supply, with a tendency on the part of fashion to require an increased use of fine wools.

In the above analysis no cognizance is taken of the similar change to medium and cross-bred wools, which has been going on in the domestic clip for some time, as annually noted in these reports. It has proved impossible to statistically measure this change; but we estimate that not over 20 per cent. of this year's clip can be called fine or fine-medium wool. The constantly increasing use of mutton in our country has been a controlling factor in bringing the change about; that it has been carried too far, where there remains the purpose to make the wool the chief product, is coming to be realized; our correspondence indicates a growing recognition of the fact, and in some sections of the country a well-developed tendency to swing back to Merino blood. It will be two or three years at the best before this tendency will show itself in the clip. In the meanwhile American users of fine wools must depend largely upon foreign supplies, which will result in still further advancing the foreign value of Merino wools, as compared with crossbreds."

A WARNING.

To the Editor of the Michigan Farmer:

I feel it my duty to warn the farmers of Michigan against buying western sheep for feeding. Thousands were shipped here one year ago, and many cases of scab has been the result. I know of one of the best flocks of sheep in Washtenaw county that has been ruined by a flock of western sheep being on the farm only sixty days last fall.

Foot rot is bad, but scab is tenfold worse on fine wool sheep. "An ounce of prevention is worth a pound of cure" in this case at least.

Washtenaw Co. ONE WHO KNOWS.

We have frequently called attention to the danger that always accompanies the importation of western sheep into the State, and the precautions necessary to secure immunity from such diseases as scab when they are brought in. Most of these sheep come through the Chicago yards, and the cars in which they are brought, and the yards themselves are generally in condition to spread this disease. It is true the government established a dipping plant at the yards, and compelled all owners to dip their sheep before being shipped out. But a single dipping is never certain to kill every scab mite on the sheep, and the survival of one or more of these little insects will result in an outbreak of scab later on. A second dipping within six, and not later than ten, days after the first is absolutely essential to prevent future trouble. Then suppose the cars used to transport these dipped sheep had been contaminated with scab by other sheep, by the time they reach the feeder's farm they are more than likely to have become infested with the scab mite again, so that the former dipping would be rendered useless. We have always advised feeders who have purchased western sheep to dip them as soon as they reach the farm, so as to prevent their sheds, fences, etc., becoming contaminated. No matter if the sheep have been

dipped at the Chicago yards, or are apparently free from this disease, it is best in such cases to be absolutely certain, and thorough dipping in a reliable dip is the only way in which feeders can be sure that their flock is not infected.

For The Michigan Farmer.

MULTI-PRODUCTION IN SHEEP.

It is not an uncommon thing among the medium and coarse wools to produce twins; in fact, the single lamb is more of an exception than the twin. To follow strictly in the course of theory, if one has in mind the idea of perpetuating the faculty of multi-production, such as we have in the twins and triplets, it would naturally follow that the lamb that is the result of a double birth should be used. Very probably this is true to a considerable extent, but it is more than probable that the decrease in size of twin lambs, as compared with single ones, would more than offset the difference. In my observation, I do not know that there is any reason to believe that there are any better results derived from the use of the twins than the single; that is, so far as twins and triplets are concerned. Some of the best breeding sheep that I have known of were single lambs; still they got a goodly portion of their progeny in doubles and triplets; in fact, I believe that the former would be in the majority of all produced.

It seems to be a fairly well established fact among many of the larger breeds of sheep that they have a natural tendency to be multi-producers, and that, too, without any particular encouragement. This being a seeming fact, it would almost seem that efforts could be made in other directions to a greater advantage than to attempt any improvement in this particular line. This feature seems to be one of the strong points of the larger breeds, and doubtless one of the main reasons for the immense popularity of some of the medium and coarse wools.

C. P. REYNOLDS.

FLOCKS AND FLEECES.

We have received from the secretary of the National Shropshire Record Association, S. J. Weber, Middleville, Mich., a copy of a pamphlet issued by the Association, entitled "The Type of Shropshire Sheep to Breed." The author is Prof. Herbert W. Mumford, known as a breeder of Shropshires and connected with the live stock department of the Agricultural College. The pamphlet will be sent to all applicants on the receipt of five cents to cover cost of mailing and postage.

The fall sheep shearing in Texas is practically over, and the quality of the clip, as a rule, is one of the best in the history of the state. The price for west Texas wool, 12@15c, is better than growers have received for years, still they are of the opinion that before the close of the present year wool values will advance considerably, and hence they are in no hurry to sell. As a rule Texas sheepmen are in high glee these days, as wool is almost certain to advance in price, and good muttons are bringing paying prices. Sheep will go into the winter in fine condition as the range is good. Sheepmen are out of debt this year, the first time for several years past, and they can now walk into the banks with the assurance that they are welcome and that they can get what they reasonably want. Stock sheep are finding ready sale at prices almost treble figures of two or three years ago. And all this prosperity and the upbuilding of the sheep industry is due to the repeal of the free wool clause of the Wilson tariff bill and placing wool on the dutiable list.—Texas Stockman.

Some time ago farmers who care to handle sheep discovered that it was cheaper to buy the Western stock and feed it than to raise their own flocks, unless they were aiming at a high and special grade. Wool and mutton quality is well combined in the high grade Merino of the Western plains, and farmers who want to carry a few hundred through the winter have found them very satisfactory. The popularity of this class of feeding sheep and lambs is strongly emphasized by the increasing demand year by year. At the present time the inquiry was never better, and three times as many such animals could be sold readily.—Drovers' Journal.

The Phenix (Arizona) Herald, speaking of stock raising in that territory, generally regarded as worthless for

agricultural purposes, says of the increase and improvement of its flocks: The climatic conditions, which are found favorable for cattle raising, are equally favorable for sheep breeding. There is no danger of the whole flock being smothered by a snowstorm in a few hours, but, on the contrary, all the year round the sheep can roam over the pasture of pine grass in the mountain districts, or the alfalfa of the plains, and increase in numbers and avoid dupes in a way unparalleled elsewhere. As in the case of the cattle, the breed of sheep is being improved by the introduction of Merino, Southdown and Cotswold strains, with an immediate result of the improvement in the quality of the mutton and the fleece. Much more attention has lately been given in Arizona to raising cattle than to any other stock. Sheep raising, however, is rapidly on the increase in the northern part of the territory. The industry has been confined principally to those counties in the higher altitudes of the territory; and wherever introduced has been extremely profitable.

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Grange Department.

Our Motto:—"The farmer is of more consequence than the farm, and should be first improved."

Address all correspondence for this department to
KENTON L. BUTTERFIELD,
AGRICULTURAL COLLEGE, - MICH.

News from Michigan Granges is especially solicited.

GRANGE CALENDAR.

Kent Pomona, with Paris Grange, Nov. 2.
Ingham Pomona, with Capitol Grange, Oct. 28.

SEASONABLE SUGGESTIONS

For the Good of the Order.

Every known organization, if it is successful, must have among its members those who are constantly thinking and planning and looking ahead for its benefit. Like a large business enterprise, there must be leaders and managers, and these must so conduct the affairs of management as to have and maintain the good will and respect of all members, to the end that willing compliance and participation in all work and essentials will follow. Like the successful business enterprise, all must be workers and helpers and the management must so plan and execute as to have every member realize that their help is essential to success. These statements of truth must impress upon all Grange officers the importance of their respective positions. To be successful Grange officers, each must first possess an appreciation of the honors conferred upon them by their fellow members. This naturally appeals to their pride and love for doing well that which so wholly depends upon them. To gratify this pride and ambition much thought in preparation is required, and there must be times when new and extra efforts are put forth.

NOW IS THE TIME.

The summer is now past with its depressing heat and exhaustive labors. The body and mind, invigorated with rest and cooler atmosphere, may now renew their efforts in behalf of mankind socially, educationally and influentially, through the Grange. Officers and working members should now confer and lay plans for the fall and winter work of the order.

THE PLAN SHOULD INCLUDE

First—A Grange revival. Appoint a regular meeting two weeks ahead for application night and the Grange resolve itself into a committee of the whole, each member striving to secure as many applications as possible to be presented on "Application Night." This may be continued for another meeting if desirable. Solicit and urge the very best of farm community, both young and old, to come in and assist you in bringing the Grange up to the highest possible standard of excellence and usefulness.

Second—Make special preparation for the conferring of all degrees and the rendition of all ritualistic work in the best and most impressive manner without omission or abridgment. Each officer should, if possible, commit to memory all opening and closing forms and degree work. Singing should be placed under the management of a good leader, and so practiced as to be prompt and efficient in opening and closing the Grange and in all degree work. Every Grange should be provided with the full and complete essential equipment for degree forms.

Third—At the election of officers the last regular meeting in December, select only those who will agree to be present at all meetings during the year (sickness not preventing) and who will make special study of their respective duties, so as to make the year one of marked progress in their history as a Grange. This should be insisted upon, for non-attending, unprepared, slack and incompetent officers are as a millstone fastened to the neck of an unwilling victim. Every Grange has among its members those who will, if selected, take pride in doing well for themselves and the order. It is equally essential that all members cheerfully support the officers in their efforts, and let all act in accordance with the Grange motto, "In non-essentials unity, in all things charity."

Fourth—The secretary of every Grange should now begin the work of having members pay their dues up to January 1, 1899, for at the first meeting in January the new officers are installed and at the next meeting following the new Master will impart the new Annual Word to all who have their dues paid up to January 1, 1899,

and to no others, under penalty of being removed from office if reported to the State Grange.

The payment of dues as provided by law is imperative to the life of the order, and every Grange should see that no member comes in possession of the new Annual Word unless their dues account is satisfied. Slackness in this respect has killed more Granges than most any other cause. If secretaries are inefficient in this respect, masters should assist and instruct them. If both secretary and master are slack and careless, then the Grange should insist that notices be sent to all delinquents and the weeding out or bringing up to date process begun, so that when the time comes for giving out the new Annual no member can complain of lack of notice. If the new Annual is refused him. Every Grange should strive to not lose any worthy members, and if necessary special committees should be sent out to interview them for continuance of membership and the payment of dues.

Fifth—Through the lecturer alone, the lecturer assisted by a special committee, or a committee acting alone, much thoughtful and thorough preparation should be given and made respectively for educational and literary programs.

This work should be planned ahead as much as possible to be successful. The program should cover a wide range, including at least one substantial subject at each meeting, essays, recitations, select readings, dialogues, music (both vocal and instrumental), and so arranged as to be entertaining, pleasing and profitable to old and young. Children of members can be profitably used in Grange programs. Grange programs should anticipate special days and occasions, such as Thanksgiving, Christmas, New Years, Washington's Birthday, Fourth of July, etc., etc., with May Day, Harvest Festivals and many other specialties which the ingenious lecturer will plan and execute. It is a fact that an up-to-date, persevering lecturer can carry a Grange successfully through a year even when other leading officers are very deficient in their Grange duties.

Sixth—Resolve to take a new start in co-operative purchasing. The State Grange is making a strong effort to assist members all over the State in these respects. It might be perplexing to the easily discouraged in noting that many Grange masters or secretaries have failed to co-operate with the State Grange in its effort to assist in building up local Granges by direct purchasing of the common necessities of the farm and household at a considerable saving in cost. As above stated, let us all resolve to give these things more attention. Elect officers who will not be careless or indifferent to all the notices and trade contracts sent them by the State Grange. The master should inform all the members of contracts made and also that the secretary will keep all these on file at all meetings of the Grange for the convenience of all members who may desire to inspect them. Report comes from many dissatisfied members that their officers have been disrespectful of the welfare of the Grange in these respects and no notices of contracts have been preserved and properly filed with the secretary as provided. The welfare of the order demands greater care in co-operative matters.

ASSISTANT SECRETARIES.

Now that much extra work is liable to fall upon secretaries through co-operative purchasing and having trade contracts on hand for the use of members at Grange meetings, masters should be authorized to appoint assistants, or the Grange may place all co-operative matters in the hands of a business committee. Relief should be given secretaries in one of these ways.

Seventh—All Granges should work together in harmony and fraternity, and the individual members should remember that harmony and good will toward each other are essential to success. We have many Granges in Michigan that have solved the problem of success in a very satisfactory degree. Their example should be studied and followed by those Granges that are more or less divided and troubled with contentions. The members of a Grange must be in the most friendly mood with each other or success cannot result from their efforts.

Eighth—Be prompt in attendance at all Grange meetings, and officers should surely call the Grange on time, even if no more than seven (the lowest legal quorum) are present. Late calling, slow and dragging meetings and late closing have discouraged more would-be active

Grange members than most other causes. The active, prompt person is placed in misery almost, if compelled to sit and wait the motions of an always behind master. Be prompt and dispatch the work of the Grange with energy is one of the golden rules which lead to Grange success.

And now, sisters and brothers all over Michigan, you are earnestly appealed to in all these respects "For the Good of the Order."

Please consider each and every proposition and put every one into practice, for in these ways you will be on the road to the greatest possible success in Grange work. Fraternally.

GEO. B. HORTON.

THE OCTOBER TOPIC.

What Improvement Can Be Made in County Government?

BY R. K. DIVINE, OF OAKLAND CO.

1. I would recommend economy in all of its different branches, from the highest officer down to the least in the county.

2. Every officer should be paid an annual salary.

3. Each officer should collect all the fees in his department and pay every cent into the treasury of the county.

4. Judges of our courts should so arrange the business of the courts that jurors and witnesses are not detained for days at the expense of the county.

5. The board of supervisors, if they would appoint their committees at their October session, to have their reports ready from the treasurer and other officers for the annual session in January, how much time and expense they would save. Have the board work with the same diligence and interest as they would have a man work for them.

I have suggested a few points which, if carried out, would save counties thousands of dollars annually.

As you stated that you did not want a long article, I'll close, hoping that the next legislature will pass some measure that will relieve us from the heavy burden of taxes that we have to pay annually.

GRANGE NEWS.

POSTAL JOTTINGS.

Limecreek Grange, No. 712—Lenawee Co.—Have been grading our yard preparatory to building shed. Sent delegates to our county convention, at which Master C. R. Bradish and wife were elected delegates to attend the State convention.—Cor.

Alumina Grange, No. 585—Muskegon Co.—October 8, question discussed, "Which is the most profitable, thirty hens or one cow?" Decided that thirty hens, properly taken care of, are most profitable. A very fine apple exhibit was made by Bro. H. W. Crawford.—Mrs. Dell Viets.

Fruit Ridge Grange, No. 276—Lenawee Co.—visited South Dover Grange October 1 and furnished program. At our last meeting the contest banquet was indulged in, furnished by the brothers, they being vanquished by the superior program of the sisters. All had a very enjoyable time.—J. W. A.

Bradley Grange, No. 669—Allegan Co.—discussed the topics of "Would the free school book system be a benefit over the present system? It was decided it would not be. Also discussed the "Weed Law." It was thought that the law should be strictly enforced.—Alice Fox.

Ashland Grange, No. 545, held its last regular meeting October 8 with a fair attendance. We are working for the organ offered in The Michigan Farmer contest. Our last Pomona was held at Ensley. At our last meeting Mr. W. S. Merrill gave a very good synopsis of Spanish history.—Minnie A. Brink.

Hopkins Grange, No. 390—Allegan Co.—held an open meeting recently, when they disposed of a quilt, realizing \$16 for it, which goes into the organ fund. At a later meeting delegates were elected to the county convention held at Allegan. Delegates were elected to attend the State Grange at Lansing.—Mrs. H. H. H., Cor.

Courtland Grange, No. 563—Kent Co.—September 24 elected delegates to the county convention. Discussed the question, "Farm Life." Some thought farm life the most independent, and that there are many advantages and also many disadvantages. Some thought there was not as much money to be made as in some other occupations. October 8 the topic, "Town and County Government," was given out to be dis-

cussed at the next meeting. Thirty members present.—Mrs. Nancy Burch.

Capitol Grange, No. 540—Ingham Co.—The social features of Grange life are finding expression in some fine literary entertainments. Last meeting of our Grange presented some most enjoyable and instructive features. The paper upon the contemplated Nicaraguan Canal presented by Bro. Moore contained some valuable instruction for geography classes, as well as for those who listened to it. We believe that if every Grange in the State would commence a campaign for the betterment of home, farm and school by socials and other Grange work, next spring would find us far advanced. Granges should remember that the lecturer is the most important officer in the Grange. Let us hear from other Granges.—Blanche McClure, Cor.

Bowne Center Grange, No. 219—Kent Co.—holds its meetings every Saturday night. We have recently taken in fourteen new members. Worthy Master John G. Livingston was elected delegate to the State Grange. At our last meeting we voted to hold an open meeting in the near future. October 11 we visited Irving Grange, where we listened to a very interesting program, after which we were fed on the fat of the land. Irving Grange has been in a dormant condition for about twelve years. Last spring Bro. Travers started out, determined to reorganize, and they now have a good live Grange of 34 members. Sleeping Granges, "read what Bro. Travers has done, then go and do likewise. Irving Grange has saved its members many dollars this summer by co-operative buying. Bro. Travers will represent his district at the State Grange.—Arthur Clarke, Cor.

Boardman Valley Grange, No. 664—Kalkaska Co.—October 12 had good attendance, notwithstanding the inclemency of the weather. "What Constitutes Soil?" was discussed by Bro. Palmer, who commenced with the igneous period and made a short cut through glacial and other periods down to the present time. Is it any help to the farmer to understand geology? "What causes have assisted in turning back the tide of adversity which so recently threatened to overwhelm us?" was tackled by Bros. Carroll, Palmer and Rosenberg, and as each took a non-partisan view no quarrel resulted. Good crops, good markets and a restoration of confidence were the chief causes mentioned. Sister Carroll was called on to explain "How Plants Grow." "We prepare the soil, plant the seed and cultivate. Warmth, moisture and sunshine do the rest." Bro. Carlisle offered to present two names for membership if the Grange would present two more. "What necessity is there for revising the present constitution of Michigan?" will be discussed at our next meeting.—A. W. Carroll.

AFTER TWENTY YEARS.

Capac Grange, No. 504, in St. Clair county, has taken a new start after a dormant period of nearly 20 years. We reorganized with 26 charter members on June 30th, 1898. At our last regular meeting we elected delegates to the county convention. By joining together on our order for phosphate we saved about \$25. We are all new beginners in the Grange work, but will soon learn.—H. L. Balden, Sec.

LAPEER POMONA.

Lapeer County Pomona Grange held its October meeting with Montgomery Grange on Tuesday, the 4th. Four Granges of the county were represented. A good program was prepared by Brother A. Stover and was discussed with much interest. There was a large attendance. The afternoon meeting was public. It was one of the best meetings we have had for some time. The county convention was held at the same time. Brother Ephner Palmerlee, of Lapeer Grange, was elected delegate to the State Grange. Our next meeting will be held with Lapeer Grange, January 12.—A Patron.

A SILVER JUBILEE.

Saturday, October 8th, Parkville Grange celebrated the twenty-fifth anniversary of its organization. The day was fine, the attendance not large, but the occasion was a joyous one, a day long to be remembered. Brother Jason Woodman, the State Grange lecturer, gave us a good lecture. He convinced some of the backsliders that they could not afford to stay out of the Grange. Some six or seven gave us their names for reinstatements, besides one outsider, and we found a few more almost persuaded. The event was not only a pleasant one, but the jubilee was a success. The sisters had

the tables sumptuously loaded with the very best. Mr. Jason Woodman thought a few sample copies of The Michigan Farmer might induce someone to subscribe for the paper in the near future.—David Handshaw.

LENAWEE POMONA.

Lenawee County Pomona Grange met at the hall of Macon Grange on Thursday, October 6. Before noon there was a fifth degree session, and after dinner 21 candidates were instructed in the fifth degree.

The afternoon session was held as an open meeting and friends were invited in. Brother Horton acted as lecturer. He stated that there were over 2,000 members of the 27 Granges in Lenawee county.

The address of welcome was given by Miss Lois Bond, of Macon Grange, and was responded to by Rev. Bro. Nickerson of Ridgeway Grange. P. H. Dowling, of Rome, read a paper on "Seeds, and Nature's Methods of Sowing Them." He began by citing the spores of the fungus and the bacterial diseases of plants and animals, their nature and causes and followed on to the sturdy trees of the forest, giving many of the intervening classes a passing comment.

James W. Helme, of Adrian Grange, read a short paper entitled "How do the Experiment Stations Benefit the Farmer?" and proceeded to show that they were to the farmer the most important branch of governmental work. For each individual farmer to prove all experiments for himself would be expensive, but many are the knotty problems of agriculture that have been worked out to a successful finish by the experiment stations.

A paper by Mrs. Russell, of Macon, was entitled "What is Life, and What are We Going to Do with It?" She advised working, not only for the present, but the future. Be ever cheerful. Women are every year finding out more and more their ability to cope with the world, and are availing themselves of it.

Mr. Laing, manager of circulation for The Michigan Farmer, was with us and gave us some new views of the paper that has been printing our Grange news for the last two years. He had come by request to meet with the Pomona Grange that had asked The Michigan Farmer to make some provision if possible whereby the efforts of two friendly societies of different make-up might each have a contest of its own, and now reports a favorable outlook for the speedy collection of the entire list of 5,000 trial subscribers required of both Farmers' Clubs and Granges combined. The Michigan Farmer people have given the Grange and Farmers' Clubs rates for trial subscribers below actual cost; and with the expense of two costly organs added, all branches of both organizations should enter heartily into the complete house to house canvass of all farming territory within reach.

R. A. Woolsey, secretary of the Grange Mutual Fire Insurance Company of Lenawee county, reported over \$425,000 worth of insurance taken and a prospect of reaching the half million mark by the end of the year. Freedom from any loss by fire to the present, with no assessments, may not continue, but all were requested to look to their lanterns, chimney flues, and all other fruitful sources of fires, as the long nights and cool weather is coming on.

Reports of subordinate Granges finished the day's work. Music, both vocal and instrumental, was furnished by the Macon people, and we have to thank them for many courtesies in getting to and from trains and other forms of hospitality.—E. W. Allis.

THE ENGLISH UNION.

SIMILAR TO THE GRANGE WITH DIFFERENT NAME.

It will be interesting to the members of the Grange and to farmers generally in this country, to know that an organization for the protection of the interests of agriculture is now deemed a necessity in England, and that such an organization now exists in that country with objects similar in many respects to those of the Grange. The fact that such an organization exists in the nation that is nearest to us in all the ties that can bind nations together, and that it is a powerful factor in protecting the interests of the British farmer, is of itself an unanswerable argument in favor of the Grange, which has accomplished so much for the farming interests of this country.

The British organization is called "The National Agricultural Union,"

and was founded on the proposed plan of Lord Winchelsea at an agricultural conference in London in 1892.

"Its objects are to unite all classes connected with the land, in the defence of their common interests, and to promote the welfare of British agriculture both in and out of Parliament." Its organization consists of a central council, rural councils, branches and affiliated societies. A branch is similar to a subordinate grange in most respects, but its representation is different, owing to different conditions.

English agriculturists are divided into three classes: land owners, farmers and laborers. This organization places all classes on an equality so far as representation is concerned. Each branch elects two land owners, two farmers and two laborers to the rural councils, and the central council is composed of the same proportion of representatives from the rural councils.

All agricultural societies can have representation in the central council under certain fixed rules. Each member of the branches pays an annual due. The land owners pay from five shillings to one pound, according to the amount of land they own. The farmers or renters pay from two to 10 shillings. The laborers pay a penny a month. All other persons two shillings a year. Unlike the Grange, the union does not seem to have its social and educational features, but its work is directed largely to bringing the importance of British agriculture more directly to the attention of the people, and securing legislation for its interests. Like the Grange, the union has secured most excellent results in this direction.

If the three classes of English agriculturists find organization a necessity for the protection of their interests, and generally become members of it, American farmers surely ought to take advantage of the same means for advancing their interests, and instead of a small minority of farmers belonging to the Grange, the best farmers' organization that ever existed, the great majority of farmers should become members and thus largely increase its influence and power for good in the manifold features of its work.

ALPHA MESSER,
Lecturer National Grange.

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Corunna, Mich.

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Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case fully, also name and address of the writer. The initials will only be given. When an answer is requested by mail it becomes private practice, and a fee of one dollar must accompany the letter.

Chronic stringhalt.—A horse jerks hind leg up when he first starts. Has done so the past two years. W. M., Adrian, Mich.—Chronic stringhalt is incurable. You had better leave him alone as it does not interfere with his usefulness.

Sidebone.—Three-year-old Percheron colt has a sidebone on right fore foot. It does not lame him. However, I should like to have it taken off. M. S., Bay City, Mich.—As a rule, sidebone does not cause lameness. Apply tincture iodine once a day and use him. Slow work will do him no harm.

Splint.—Four-year-old horse went lame six weeks ago. I notice a small hard bunch under knee on right fore leg. It is growing larger and is feverish. J. C. W., Ann Arbor, Mich.—Your horse has a splint. Give him rest and apply caustic balsam. If you drive him at all go slowly on hard roads. See that he does not strike his leg with the opposite foot.

Heaves.—Young mare had distemper two months ago. Now breathes as though she had heaves. J. W. F., Hillsdale, Mich.—Give two drams Fowler's solution twice a day until she appears some better. Feed more grain and less hay and bulky food. Keep her exercised. Her food should be well cured and of good quality.

Navicular disease.—Road horse goes lame. No swelling to indicate a strain or bruise. He warms out of nearly all of it but after standing an hour he starts off very lame. O. W., White Pigeon, Mich.—Stand him in wet clay a few hours a day and blister his coronet once every ten days, using caustic balsam.

Nail puncture.—Two weeks ago my horse stepped on wire nail. Foot was punctured near front of frog. I pulled nail out the next day. He is very lame but leg does not swell. I put hot turpentine in wound, also poulticed foot with cow manure. None of the remedies have done any good. E. J. C., Munith, Mich.—Nail punctured foot in very bad place and injured the periosteum and bone. His recovery will be slow. Keep the foot clean and make

the opening where nail penetrated foot larger; thin the sole and apply one part carbolic acid to twenty parts water twice a day. Also a little iodoform immediately afterward. Cover wound with oakum and keep a cloth on foot until he recovers.

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Illustrated Announcement and Sample Copies sent on request.

THE YOUTH'S COMPANION, 201 Columbus Ave., Boston, Mass.

Horticultural

For The Michigan Farmer.

LATE FALL WORK IN THE GARDEN.

During late fall and sometimes in early winter we have a few days of warm weather which can be profitably used for doing work in the garden, and in my experience in the market garden, the success of the next season's work often depends on the preparation made in the fall. I like to get all the weeds out of the strawberry beds and thin the plants in the rows. This allows the remaining plants to make a larger root growth during the wet weather we usually have before winter. This work also saves valuable time in the spring, for if there are no weeds in the bed when it is mulched for winter, but little work will be required to keep it clean the next year. Strawberries may be safely set in the late fall on well drained soil that does not heave by the freezing and thawing in winter, if a mulch of manure is placed on both sides of the rows of plants after setting them. I have also found the late fall to be a good time for planting raspberries and blackberries. For the last few years I have set the plants the latter part of October and in November, and nearly every plant lived, and grew the next spring. I always place a mulch of manure around the plants when setting them and this prevents the frost from throwing out the plants in the winter or spring.

The last week in October I begin to store the winter vegetables. I have a plan for storing the part of my celery which is marketed before Christmas, which last year proved quite satisfactory to me. Instead of drawing the celery to the cellar, I store and blanch it in the field in the following way: Along one side of the field I set up a row of boards, and nail them to some stakes to hold them up on edge; then with a spading fork I dig up the unblanched celery and set the plants upright against the boards until a space about two feet wide the length of the boards has been filled in, setting the plants rather loosely together to admit the air between them. Then more boards are set up, and the process continues until a bed of plants about 15 feet wide has been made. To prevent the celery from freezing if left out during very cold weather, I lay some boards over the top of the bed, and cover it with leaves or straw, leaving openings for ventilation, which are filled with straw on the cold days. The part of my celery that is marketed in the late winter or spring is stored in the vegetable cellar, or in trenches out of doors.

The process of burying cabbages for winter use is very simple. A trench is made about 18 inches deep, and the cabbages are pulled and placed in the trench with the heads down, throwing an inch or two of earth over them to hold the leaves down, then just before the ground freezes I cover them with about eight inches of earth. The cauliflower, not yet disposed of, I can keep a considerable time in a cold frame or light cellar by planting the roots in moist soil.

For storing turnips, carrots, beets and potatoes, I dig a pit three or four feet deep, about six feet wide and of the length required. The vegetables are placed in the pit in piles three or four feet wide across the pit, leaving a space of two feet or more between each pile to be filled with earth. The advantage of the sections, are that the vegetables in one can be taken out without exposing the others. In covering the pits, the top should be rounded, so the water will run off. When the vegetables are all stored, my next work is laying down and covering the tender varieties of grapes and raspberries. Grape vines I do not usually cover after they are three years old, except my Delawares and Niagaras.

When everything is protected for winter, I prepare the hot-beds, and cold frames for the next spring's use; the old manure and soil can be removed from them and used for mulching the small fruits, and the soil which is to be used in the frames in the spring should be dug and covered with manure or straw so deep that it will not freeze. I plow all the garden that is not sowed to crimson clover, and try to set the furrows on edge, so the frost will pulverize them better. Just before the ground freezes is also a good time to obtain cuttings of currants,

grapes and blackberries, for then they can be buried in the ground until spring, when they will be ready for planting in nursery rows.

Delaware Co., N. Y. W. H. JENKINS.

GERMAN OBJECTIONS TO AMERICAN FRUIT.

The American consul at Cologne, Germany, Mr. John A. Barnes, sends the following facts regarding the sale of American fruits in that country, which should be heeded by those who are interested in the export of fruits or their preparation for foreign markets: My attention has recently been called to certain objections to the manner of preparing American fruits, especially apricots, for the German market, which have been made by the local authorities of the town of Neuwied in this consular district.

A large importer of American fruit in this city has received and disposed of over 100,000 marks, (\$23,000) worth of American apricots alone during the past year. Until recently, this class of fruit has been exempt from the attention and criticism of German officials; but a few days ago this importer, with many others, was cited to appear before the local authorities of Neuwied for the purpose of a discussion and explanation regarding the preparation of American apricots, which were being sold there. The fruit had been received for the most part from New York City, Chicago, San Francisco and San Jose. Many samples have recently been taken from the local dealers by the police officials of Neuwied for analysis. This has resulted in the discovery that these apricots had been treated in America with a preparation of sulphurous acid, which, it appears, is in direct violation of a statute of the German law.

Persons interested in the sale of American fruits here strongly desire to remove all reasons for these investigations, and have requested me, through the department of state, to call the attention of the American shippers to this condition of affairs, and to the absolute necessity of abstaining from the use of sulphurous acid, or any such preparation, in the exportation of fruit to this market. A persistence in this practice will undoubtedly result in the entire exclusion of such fruits from Germany. Stricter attention must be given to the German laws. American dealers are still shipping to this market dried-apple slices which have been cured upon zinc frames. This process has been strongly condemned by the German government, and the sale or handling of fruit thus prepared is prohibited by law. These violations are suicidal in their effect, and damaging to the several branches of American trade.

It is the opinion of importers here that in some instances American pears are also treated with the sulphurous acid process. It is of no consequence that competent medical authorities here have decided that fruit treated with sulphurous acid is not detrimental to health. It is sufficient for the watchful local official to know that the law forbids the sale of such fruits, and that his supreme duty consists in the strict enforcement of the law as he finds it upon the statute books.

American fruits are so far superior to other fruits found in this market that it would seem an easy matter for them to dominate the trade, without a resort to practices which tend to discredit them.

ONION MILDEW.

M. G. Kains, of the United States Department of Agriculture, says of this disease of the onion:

A serious disease has taken possession of many of the onion fields throughout the country and threatens to reduce the crop in certain sections. It is the onion mildew, so much dreaded by the European and Bermuda onion growers. The disease appears on the leaves during the spring and early summer months as dirty greenish-grey, powdery patches consisting of the summer spores or seed bodies, which are produced with wonderful rapidity and are carried by winds and by insects to other plants. These spores are exceedingly delicate and short-lived but make up for these frailties by their enormous numbers.

As cooler weather approaches a second kind of seed body known as the "resting spore" is developed. The resting spores are provided with thick walls and are far less liable to injury from cold and other adverse conditions than the summer spores. The resting

spores pass the winter either in the diseased onion bulb, in the leaf, or in the soil. Since the bulbs are seldom planted the spread of the disease from this cause is of no account. But since it is the common practice to leave onion waste in the field, infection of the ground is usually very rapid and grows more rapidly each year.

Perhaps the best way to check the spread of the disease is to burn all the refuse. A good preventive measure is the practice of changing the crop for a year or two. But this is usually only partially successful, since the spores may be carried from adjoining fields. Spraying with Bordeaux mixture and other fungicides has generally not been very satisfactory since they do not readily stick to the leaves and since some of them, particularly Bordeaux mixture, are injurious to the plants. It will be found best to practice the burning of all refuse and also to change the land the following season. These precautionary measures should reduce the damage to a minimum.

HOW TO GROW MUSHROOMS.

John G. Gardener gives the following details of how he grows mushrooms, in the American Florist:

Procure fresh horse droppings in as large a quantity as possible, shake out the longest straw and add to the pile one-third its weight of new loam, intermixing thoroughly. The compost should be kept under cover, so as to preserve it from wetting rains, until a sufficient quantity has been collected to make a bed of the desired size.

In making the bed spread out a layer of the material thus prepared from three to four inches deep and of the required dimensions as to length and width. Tread or tamp this layer until it is quite firm and add others in the same way until the bed is ten or twelve inches in depth. The temperature of this compact mass of soil and droppings will in a few days rise to 100 degrees or over, as may be ascertained on plunging a thermometer into it, and then gradually decline. On going down to the 90-degree mark it will be in a proper condition for spawning, and this is accomplished by making holes three inches deep and twelve to fourteen inches apart in the bed with a trowel, and inserting therein pieces of brick spawn about two inches square, and replacing the compost. On the completion of this operation it will be found necessary to level the surface again, and the bed should also be made as firm as before spawning. About one week later apply a layer of loam one and a half inches thick to the surface, smoothing and tamping it lightly with the back of a spade.

The temperature and moisture of the mushroom house must be given daily attention, maintaining the former at from 60 to 70 degrees with a moist air. The bed will not need water until the mushrooms appear, five or six weeks after spawning, and when they show on the surface as large as peas a light watering should be given with water heated to about 100 degrees.

I find the best temperature of a mushroom house to be 60 degrees, with the air moist to a perceptible degree only. The surface of the bed should also be kept moist, applying water when necessary by means of a hand watering-pot with a fine sprinkler, or a hand syringe, using water never below 80 degrees. Air should be admitted to the house from the top, and must always be under control at a temperature never below 45 degrees. Upon entering or leaving, all currents of air likely to pass over the surface should be guarded against. The dry spawn will become active fourteen days after insertion in the bed, but in cases where the bed has been allowed to get dry after the cessation of fermentation—which often happens in the absence of close attention—when two

weeks have elapsed since spawning, apply water through a fine sprinkler until it penetrates the bed to a depth of two inches, with the water at 90 degrees, at the same time increasing the house temperature 10 degrees. Mushrooms will then appear in four or five weeks.

CABBAGE ROT.

Prof. H. L. Fernald, of the Wisconsin experiment station, says: This is a bacterial disease and begins to make its appearance on the edges of the leaves. Often the lower outer leaves are the first to succumb, but quite frequently nearly all the leaves are affected about the same time. It works along the veins, finally reaching the main stem, where, when once established, it soon spreads throughout the whole plant. A great deal of loss is frequently caused when the cabbages are in store for the winter, although there were apparently no symptoms of rot at harvest time. All heads should be closely inspected, and if the slightest black spot is found the affected head should be thrown out. Such rejected heads are suitable for immediate consumption.

"Being a bacterial disease, it is difficult to treat successfully. Rotation of crops is helpful in ridding the ground of the specific organism. The removal of all old stumps and leaves assists in decreasing the disease. Care should be taken not to plant cabbage on low ground, where the soil moisture will produce too luxuriant a growth. The trouble may be checked in the early stages by going through and removing all affected leaves, which are taken from the field. Do this regularly."

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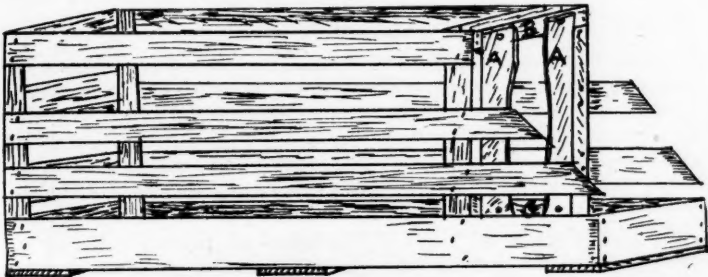
The Dairy.

Conducted by J. H. Brown. Every reader of The Michigan Farmer, who is interested in dairy matters, is earnestly invited to frequently contribute to this department. Send all dairy correspondence to Battle Creek, Mich.

SHIPPING DEVICES FOR DAIRY CATTLE.

Shippers of live stock, especially for breeding purposes, are dependent upon crating most of the animals they sell, and ship through the express companies. Hence it becomes a matter of importance to breeders, especially those engaged in it only for a short time, or beginning new, to get onto the very best devices possible for the safe and comfortable transportation of what stock they may have to ship. To the amateur breeder it is quite a matter of guesswork to size up an animal and then go to work and make a crate that will fit it, so that it will be neither too large nor too small, for one is nearly as bad as the other.

In the matter of crating young calves, almost any crate that is long enough does quite well, because a calf will not struggle long, but gives up as soon as it finds it is confined. Mature cattle or near full grown should have an entirely different receptacle, especially yearling bulls that have begun to "feel their oats." A mere box crate, where the animal's head is not confined, must be made doubly strong or the obstreperous fellow will break out. With this in view we have adopted the plan of confining them in a stanchion constructed in front of the crate after the manner given in our illustration. The entire affair is made



SHIPPING CRATE.

of 1-inch hemlock, from 6-inch material, except the bottom, which is made from 10 or 12-inch, according to the age of the animal shipped.

We find that for a 600 to 700-pound animal a crate should contain the following dimensions: Height, 3 feet 10 inches; width, 2 feet; length from rear to stanchion posts, 5 feet 8 inches, with feed trough in front 16 inches, making the entire length of the crate 7 feet.

The main thing is to see that all the timbers about the stanchions are strong and well nailed together and clinched with wire nails. The stanchion posts proper, A, would be better made from 1x6-inch oak and bolted to the top board B and baseboard C, with 3-8 bolts, so that the animal can be led out in front by taking out the bolts and removing the posts. It is not best, we think, to slat the top, but leave it open. It is often a good policy to lead the animal in and out and get it used to the change it will undergo when it leaves the farm.

A breeder who cares for his "rep." and for future sales will make every arrangement for the comfort of stock leaving his hands that is possible. If the weather is hot and flies bad a bur-lap covering should be provided and placed over it to keep the flies away from the body. A sack of feed and some hay should accompany the outfit, and most important of all, a 6-quart bucket, tied onto crate with a tag on it with the inscription: "Please water and feed me," with the hope that it may touch the heart of the "other fellow" on the outside.

Always place a halter on all cattle shipped, in case of accident, or the consignee wanting to lead from station. In every case see that cattle thus consigned get promptly started and the party to whom they are consigned is very promptly notified beforehand as to the date and probable hour you ship, as every hour that cattle must stand in a crate reduces their vitality. They should be liberated as soon after arrival as possible.

We have shipped heifers within three weeks of calving, and had them carry with perfect safety in this crate, while we would not have dared to place them in a box crate for fear of them getting down and not succeed in

getting up. It is a noticeable fact that a fine animal, either cow or bull, sent out in a strong, neatly fitting crate, will always attract notice, and spectators will at once look for the shipper's name and address. So we always have shipping cards printed with blank lines at top for shipping address and name of breeder and address printed below.

Ohio. GEO. E. SCOTT.
(We would add to the above description the suggestion that the top board B and baseboard C contain plenty of holes so that the uprights A A may be readily adjusted to suit the animal. The stanchion may thus be changed to properly fit the neck of the animal, and an animal possessing a thin neck and small head may be as securely fastened as one with a thicker neck and larger head.)

The top and bottom pieces should be 2x4 hard wood, instead of an inch board, as friend Scott suggests.—Ed.)

RAISING CALVES.

The farmer and dairyman who expects to continue in the business will find it to his interest to raise a number of calves each year to replace older cattle that have been disposed of. There is a vast difference in calves. Some are not worth keeping until maturity. All such should be fattened for veal and disposed of when five or six weeks old. With a little care, practice and the exercise of good judgment, what a calf will be at maturity when only a few days old.

If intended for the dairy the calf should be closely examined as to the conformation of the udder and teats. One can see in miniature these important organs, and have a fairly definite

first week or ten days, the calf should have full milk; the amount will depend somewhat upon the size and breed of the calf. While four pounds at a feed would be enough for a delicate little Jersey, six or eight might not be too much for a larger or more robust Holstein or Shorthorn. After about 10 days, skim-milk can gradually be substituted for the whole milk, doing so at the rate of about a pound per day, until all skim-milk is fed. By making the change gradually, no evil effects will be noticed.

When beginning the use of skim-milk instead of whole milk is a good time to begin the use of a little meal of some kind in the milk. Middlings, oil meal and a mixture of oats, wheat and corn, equal parts ground together, are all good. These will be better if scalded before being added to the milk. By beginning with a small quantity, say a tablespoonful, and increasing gradually, no difficulty need be feared from scours. When one wishes to raise calves on skim-milk for veal, something must be added to the milk to replace the butter fat extracted. When intended for the butcher at an early age, larger quantities of corn meal can be fed than otherwise, the object in growing calves for the dairy being to encourage the growth of bone and muscle, rather than fat.

Twice per day is as often as the calf need be fed, at any age. To feed oftener is an unnecessary waste of time

and labor, but it should be fed at regular hours. This is important as well as the amount of its feed. When once established, the quantity of its feed should not be varied abruptly without good reasons. After a calf is several weeks old it will begin to eat a little hay, and a little should be given it at each meal—just enough so that it will be eaten before the next feeding time. It will then eat it with a relish, and eat more than if it has it always before it. Bright clover hay is by far the best for it.

If milk is scarce, a good substitute for it can be made by steeping clover hay in hot water, making a strong tea, and pouring it hot over some of the meals, or what should be still better, a mixture of the meals before mentioned. Various prepared meals are sold for the feeding of calves, that are claimed to be a perfect substitute for milk. A farmer can, by mixing about 50 percent oil meal, 20 per cent each of ground corn and oats, and 10 per cent of middlings, have a meal that will be just as good at much less cost.

O. J. VINE.

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THE MICHIGAN FARMER

—AND—
State Journal of Agriculture.

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DETROIT, SATURDAY, OCT. 22, 1898.

This paper is entered at the Detroit Postoffice as second class matter.

THE POTATO CROP.

To the Editor of The Michigan Farmer:

In your issue of 8th inst., and one of previous week, I saw the potato crop was under discussion. I would say for this part of Montcalm county that where there is one acre of good potatoes there are ten acres that would not pay the expense of digging. I have nine acres which were said to be the best potatoes in this vicinity by the neighbors, and a number of other persons who were transients expressed the same opinion. The frost of Sept. 1st killed about half of the field, and I had them dug. They will yield 50 bushels to the acre without sorting; perhaps one-fourth will sort out for seed and scabby. Now I would like to see one full page of The Farmer filled with reports from different parts of the State on the potato question, as it is of vital interest to every man that grows potatoes. I think they will reach 50c per bushel, and will hold for that price.
Fenwick, October 9, 1898. E. B. W.

E. K., of Porter, Midland Co., writes under date of October 17: "How is the potato crop in general throughout the State? Growers are disappointed here, as they are not turning out as good as was expected before digging commenced." That is the general tenor of the reports reaching this office. In very few instances is the crop turning out as well as expected, and it looks as if the early estimates sent out by the State and national statisticians will have to be cut down very materially when the facts regarding the crop are fully known. If the crops in other states are no better than in Michigan, higher prices are certain. The new crop is coming forward very freely from the sections which generally market in this city, and so long as they do values will not advance. Growers should not be in a hurry to market their crops of late varieties. It certainly looks as if they would be worth more later on.

Sanilac county has a big apple crop this year, and as the crop is light all over the Union, except in small districts, it will bring the farmers in that county a large amount of hard cash.

According to figures transmitted to the State Department by Consul Goway at Yokohama, there has been an astonishing increase in the imports of American flour at Japan. In 1892 the total import of that flour was 1,002 pounds, but in 1896 the business had swelled to a total of 32,000,000 pounds, with a

marked increasing tendency. During 1897 the quantity of imports slightly fell off, but the value increased \$86,183, as compared with the preceding year.

BET SUGAR IN MICHIGAN.

The starting up of the beet sugar factory at Bay City last week lends new interest to this subject. Out of over a thousand tons of the first lot delivered to the factory, only two lots of beets ran below the standard of 12 per cent sugar, and these exceptions showed 11 8-10 per cent. Many of the samples ran as high as 16, 17 and 18 per cent, and it is certain that the average will be enough over the standard to give the farmer \$4.50 a ton for his beets instead of \$4. Some farmers already figure that they will clear from \$40 to \$50 an acre from their crop of beets; but of course such returns will be exceptional. We think \$30 an acre will be a good average in a favorable season, and at that beet growing will be a profitable business in connection with other branches of farming.

Now that the business has been started under favorable circumstances, we hope to see it succeed well enough to become a profitable and important part of the agriculture of the State. To accomplish this, economy in utilizing the wastes of the factory and the field must obtain. It is economizing by the use of this material in stock-feeding which has enabled the French and German farmers to carry on the business of beet growing successfully. The very interesting letter from Prof. Clinton D. Smith, in another column, states that much of the pulp is allowed to go to waste in Nebraska, as farmers do not think it as cheap as other stock foods. However that may be in Nebraska, the case will be different in Michigan, and arrangements should be made by farmers who are growing beets to utilize the pulp in feeding cattle, sheep and hogs. It will be found very valuable when fed in conjunction with corn, as it will promote digestion and prevent the ill effects which frequently result from a strictly corn diet for fattening and store animals. Besides, feeding it out on the farm will be a great aid in keeping up its fertility, and that is something the beet grower must keep in mind at all times if he expects the business to remain permanently remunerative. In this connection we may state that French farmers regard sheep droppings as more valuable for the beet crop than the manure from other farm animals. Sheep-feeding should therefore become an established industry with the beet grower.

The suggestion, or reference, by Prof. Smith as to how the farmers of Nebraska regard the future of the industry, in view of the proposed territorial expansion of the Union, is also interesting. We have previously referred to this in The Farmer, and from the opinion then expressed we have not learned anything which has caused us to change our mind. That the addition of Cuba, Porto Rico and the Philippines to the territory of this country will surely exercise a strong influence upon the sugar industry we cannot doubt. These fertile islands, in the hands of energetic Americans, would soon double their capacity for production, and we would naturally expect both the beet and cane sugar industries to be injuriously affected by their competition. Sugar would become still cheaper, and the consumption would be greatly increased as the result of lower prices. But those islands would become great consumers of American agricultural products in return, such as meats, dairy products, breadstuffs, etc., etc., so it is probable that on the whole their acquirement would not be inimical to our agricultural interests, even if sugar production was injuriously affected.

WHY MORE MONEY IS IN CIRCULATION.

The statement of September exports, issued on Friday of last week by the Treasury Bureau of Statistics, indicates that the calendar year 1898 will show the largest export record of any calendar year in the history of our foreign commerce. No September save the exceptional one of 1897 has ever shown as large exports, and no nine months' period of the calendar year has come within \$100,000,000 of the record made by the nine months ending with September, 1898. The exports of the month were \$90,495,638, while no preceding September except that of 1897 ever exceeded \$86,000,000, the average September exports of the past fifteen years being less than \$68,000,000. The average for the nine months of the calendar year since 1884 has been \$604,000,000, thus the September exportations and those of the entire nine months were in each case more than 33 per cent in excess of the average of the corresponding periods during the past fifteen years. The September exportation of breadstuffs, while materially less than those of September of last year, are 30 per cent greater than those of September, 1896, and double those of September, 1895. Provision exports in September were larger than those of September, 1897, and for the quarter exceeded by more than \$20,000,000 the average of the corresponding period during the preceding three years. Exports of cotton, while materially less in September than in the corresponding months of 1897 and 1896, are for the nine months, much greater in value than those of the corresponding nine months of any of the preceding three years, while mineral oils for the nine months exceeded in quantity those of the corresponding period of any other year, but are slightly less in value than in 1896 and 1897, by reason of the reduced prices.

The imports of the year present an equally striking record, the total for the nine months ending with September being less than in the corresponding nine months of any year since 1885, and more than \$100,000,000 below the average of the corresponding period during the past decade, while no September in many years, except those of 1897 and 1893, showed as small importations as the one whose record is just presented.

WHY THE SPECIAL COURSES AT M. A. C.?

Since the Michigan Agricultural College has for many years legitimately devoted its energies largely to the education of young men who could spend four years within her halls, it is perfectly in keeping to ask the question why she should now offer special courses. The answer is not, however, far to seek.

There are in every county in the State young men who for various reasons cannot spend four years at a college and yet who feel the need of both mental education and manual training in special lines of farm and horticultural work. It is in recognition of this fact that the special courses are offered. One young man in the community desires to manage a creamery or cheese factory. Where shall he learn how to do it in such a way as to waste none of the products, to satisfy the patrons and to bring in a satisfactory income for all the parties interested? Either butter or cheese making is an art as well as a business. Both rest on scientific principles easy of comprehension. He may learn how to make butter in some neighboring creamery, may acquire at the same time some skill in keeping factory ac-

counts and may learn empirically the details of some one method of performing each of the operations, but it will take him, at the shortest, two years to become at all proficient, and there will still be vast fields yet unexplored within the boundaries of the knowledge that every good buttermaker should possess. One winter spent at the College will start him in the right way, will give him so thorough a foundation knowledge of the chemistry and bacteriology of buttermaking that he will intuitively understand the reasons of the various operations performed in the butter factory, and when, in his after life, new conditions arrive, new difficulties present themselves, he will know how to meet them and to make a good article, notwithstanding the adverse conditions.

The course at the College will not fit an inexperienced man to manage successfully a cheese or butter factory, but it will save him a full year in his apprenticeship.

What is true of the benefits of the special course in butter and cheese making is equally applicable to the course in live stock or in horticulture. They appeal to young people who cannot take the full course. They will lengthen life by shortening the period necessarily devoted to preparation for the life work. They appeal to the man already in business because they offer the latest ideas and the best methods in matters relating to his line of work.

Every young farmer who is now breeding live stock, or who intends to fatten stock for the market, and who can possibly get away from his business during January and February, should take the live stock course. Every dairyman should try to be at the College for as much of the dairy courses as possible. The margin of profit in fruit growing is not large enough to warrant the progressive young orchardist in neglecting the course in fruit culture if he can possibly take it.

For The Michigan Farmer.

THE PRODUCTION OF BEET SUGAR IN NEBRASKA.

Some observations made on a recent visit to the sugar beet fields of Nebraska may be of interest to some of your readers.

The fields upon which the sugar beets grow that are made up at the Grand Island factory are peculiarly situated. They are on the river bottoms of the Platte. It was this river which Bill Nye described as a mile wide and an inch deep. He would have hit it more exactly if he had said it was several miles wide and from six feet to twenty below the surface of its banks, for the river furnishes an abundant water supply to the crops growing in the valley several miles wide. The soil is black, very fine grained and fertile. The factory is a couple of miles west of the center of the city of Grand Island, and is surrounded with beet fields.

Many of the farmers are disgruntled with the Oxnards, and evidently justly so, because the latter inserted in their proposed contract this spring a clause, evidently for political effect, that they would pay but \$3.50 a ton for beets if the Sandwich Islands were annexed. Because of this difference between the factory owners and the farmers the acreage of beets this year is not as large as the factory really needs for a full season, but from what I could learn of the present feeling of the farmers this same difficulty will not stand in the way next year, and all the beets will be grown that the factory can handle. There was, however, a feeling of suspense on the part of all connected with the industry. Everyone was waiting to know what Congress was going to do with Cuba, Porto Rico and the Philippines; the idea seemed to obtain that if sugar from these localities is admitted free it will be the death of the beet sugar factories.

I was fortunate in meeting some farmers that have kept an accurate account of the cost of their beet fields

as well as their yields. These figures may be summarized as follows, remembering that the thinning and hoeing is let out to Russian families at \$12 per acre, and the harvesting is also let out by contract at \$4 per acre:

	Per acre.
Preparation of the ground.....	\$1 50
Cultivating four times.....	3 00
Thinning.....	12 00
Seed.....	3 00
Rent of land.....	6 00
Harvesting.....	4 00
Hauling fifteen tons, at 25c.....	3 75

Total cost.....\$33 25
The beets are bringing them in this year from \$50 to \$65 an acre, as the tonnage is good and the per cent of sugar high.

I was disappointed in not finding many of the farmers feeding the pulp. I noticed as I visited the factory great heaps of pulp, to which additions were being made daily, lying near the factory. Mr. H. Hake, owner of the principal hotel in the city, has fed pulp for eight years. He is now feeding 300 head of steers. He regards the pulp as valuable solely as an adjunct to roughage and grain. It has no great feeding value apart from succulence. The long soaking in water has removed the starch and sugar and pretty much all of the nutritious matter of the beet. He finds that a steer will consume, when accustomed to the ration, fully 100 pounds of pulp per day, with his other feed. It prevents shrinkage when the steers come off grass in the fall, and keeps them in a healthy and growing condition during the winter. Mr. Hake feeds the pulp in open boxes in the feed yard. He cannot feed it in extremely cold weather.

There were at least two other firms feeding stock on a comparatively large scale with the beet pulp. A visit to the factory, however, disclosed the fact that the farmers in general were not using it, although they could get it for nothing, or indeed might receive a few cents per ton if they would remove it. While in Europe the pulp is highly valued, it does not seem to meet with favor in Nebraska. It keeps well in the silo, or even in large heaps, but other feeds are so cheap in Nebraska that this product from the factory seems to be neglected.

The farmers about Grand Island are contented and prosperous. The crops this year have been excellent, and many mortgages have been paid eastern capitalists. The growing of sugar beets has contributed not a little to this result. Yours respectfully,

C. D. SMITH.
Agricultural College, Mich., Oct. 15, 1898.

For The Michigan Farmer.

NORTHERN MICHIGAN AND ITS AGRICULTURAL LANDS.

Much has been said of late pro and con of the productiveness and desirability of farming lands in the upper half of the lower peninsula, and as we are just home from a trip into Antrim, Charlevoix and Emmet counties we thought perhaps a short description of the country, as we saw it, would be of interest to The Farmer readers.

Now, while our future home may be in Emmet county, near Petoskey, we will try and not "color" our description, for we wish to give a true one. When a man leaves his family at home and goes two or three hundred miles to seek a new location in a new country, there are two things he must do to make a success of his trip—he must smother any feeling of homesickness and he must look at the country as it would be when cleared and settled. He must see in his mind's eye beautiful farm dwellings and shaded drives. It would be folly for a person to go from an old, settled country into one that is entirely or mostly new and expect to find a place that will please, unless he look beyond that which is before the eye.

The land in the sections mentioned is rolling, with now and then a good-sized tract that is level. These level portions lie along river courses, and the soil is a rich black loam. Of the higher and rolling portions the soil is mostly a sand or gravelly loam, with once in a while a piece of very light sand, or a stiff clay hill. Neither of these last soils are of much use for agricultural purposes. As in other places, so it is there, the richer and more productive lands are found near lakes or along the streams, and so far as we were able to learn they are equal, or nearly so, to lands found in the southern part of the State. Generally speaking, that section of the country is not adapted to the successful culture of corn, although we saw several very nice pieces. One field in Echo township, Antrim county, we noticed as being particularly fine, and

our cousin told us that last year it was from ten to fifteen feet high. It was a dent variety, and the field was never known to have been touched by frost. We said the country was not adapted to the successful cultivation of corn—we ought to have said the most successful, for while it is not so well adapted as a corn country like Iowa and some of the most favorable parts of Michigan, yet it is just as well adapted to the cultivation of that crop as is St. Clair county, and some sections of the country are much more so. The severe frosts of last July did considerable damage to the corn and potato crop in that section, more especially back from the lake.

Along the line of the Grand Rapids & Indiana Railroad, from Reed City north through Osceola, Wexford and Kalkaska counties, we noticed that the corn and potato crop would be almost a failure. In the most of cases the fields had not been touched with hoe or cultivator since the frost. A person cannot judge of a country correctly, however, by that portion of it lying along a railroad, as they generally run through the poorest part. We were informed that some farmers who had planted from 50 to 100 acres to potatoes were summer following them preparatory to sowing wheat. I might say right here that the potato is what the farmers mostly depend upon for their money crop. Some idea of the magnitude of the crop may be had by knowing that two banks of Traverse City alone paid out two million dollars to farmers of that vicinity for potatoes.

In places that were protected somewhat the damage by frost was only slight, and if the corn crop had been thoroughly cultivated afterward good crops of corn might have been realized. My cousin, who lives in Echo township, had two pieces of corn lying on opposite sides of a road; both were on bottom lands and both were equally injured by the frost. One field had been cultivated and hoed in order to subdue some Canada thistles, while the other had been left to grow up to weeds. The former was so far ahead of the latter that there was no comparison.

One great drawback to successful farming in that section is the fact that farmers pay too much attention to lumbering in winter and tan-barking in summer, neglecting their farms in consequence. Those who have attended right to the business of tilling the soil have productive farms and comfortable homes.

The counties of Antrim, Charlevoix and Emmet abound with beautiful lakes and rippling streams, and it is here that the festive resorter hies him for the summer, bringing his pockets full of money, so to speak. Of course these summer tenants are of a necessity consumers and not producers, so that a large market is created for everything in the line of edibles—milk, butter, eggs, fruits and vegetables of all kinds. Every year brings an increase in this summer population, and this increase is likely to keep the demand for produce good, at least for some years to come, except for one or two articles—plums and perhaps peaches. A large acreage has been lately set to plums, and when these come into bearing prices will necessarily be low. One farmer, whose nearest shipping point was some five or six miles distant, had set some fifteen or twenty acres, which was a foolish operation, as we look at it. It is a noticeable fact that in all countries and climes when farmers see one of their number make a good thing in a certain line they all rush into it and down go prices, and then they get out as fast as possible.

St. Clair Co. M. N. EDGERTON.

In 1897 there were 41,272 acres of sugar beets grown in the United States, producing 389,635 tons of beets. These beets, when manufactured, produced 90,491,670 pounds of refined sugar. This amount will undoubtedly be greatly surpassed the present season.

Cured Fistula and Bog Spavin When Veterinary Surgeons Failed.

CARDONIA, Clay Co., Ind., Oct. 12, 1898.

LAWRENCE-WILLIAMS Co., Cleveland, Ohio:

I have used Gombault's Caustic Balsam for a case of fistula which a good veterinary surgeon failed to cure after 35 days' treatment at a cost of \$12 for treatment, 40 cents per day at livery stable, \$14, total \$26. It was cured with three applications of Balsam. I also treated one of my neighbor's horses for bog spavin and with two applications he was sound and well. I am about to start on another case of bone spavin; will write and let you know the result. I know of four cases of fistula in this neighborhood that Gombault's Caustic Balsam has cured.

Yours Respectfully, A. P. GILMOU.

BRITISH GRAIN TRADE.

From our Special English Correspondent.

The twenty chief wheat-producing countries of the world are credited with 270,000,000 quarters of wheat, against 240,000,000 in 1897 and 250,000,000 in 1896. Thus 1898 comes out as much the best of the three years, and about this there is in reality no doubt. The doubt arises when the question of requirements comes in. These are put by "Dornbuach's Cargoes List" at 256,000,000 quarters, so that three years, with 768,000,000 quarters required, have had 760,000,000 quarters supply. It may be so, but the figures must be to a great extent guess-work. I doubt if your States and Canada consume as much as 50,000,000 quarters, and I also question if Austria-Hungary has a deficiency of 650,000,000 quarters. My own advices from Vienna and Pesth indicate a surplus. At the same time the only fair way to look at these compilations is at the conclusions to which they lead us, and here, where the superiority of 1898 over 1897 and 1896 is indicated, there is every reason to believe that the fact is fully as stated.

The surplus, 8,000,000 quarters of wheat, need excite no alarm among holders, whether exporters or farmers. In the United Kingdom stocks are far below an average, and the quantity of wheat on passage is also less than usual. There is no reason to fear a decline below prices at present prevailing, while with crop prospects for 1899 the reverse of satisfactory it may be only expedient to store wheat against deficiency a year hence. The crops of 1899 may be said to be a good way off in any case, but because "it is a far cry to Lochawe" we may not therefore deny that loch's existence or our capacity of eventually coming to it. The drought which has prevailed has raised the deficiency of rainfall to thirteen inches on eighteen months, and the effect on the newly sown wheat can scarcely fail to be serious. Less than usual will be sown; of what is sown less than usual will germinate, and of such commencements nothing but short harvests can result.

The one fact which appears to me to make against values, and which is likely to arrest any material advances, is not yet occupying the attention of the markets. That it will do so, however, I regard as probable, and but for the standing possibility of a flaw in statistics, as certain. I refer to the wheat exports of Russia. These are currently estimated by our leading authorities in the cargo trade at 9,000,000 quarters, whereas out of the short crop of 1897 not less than 16,000,000 quarters were exported. Now the advices reaching me from sources which I have always found trustworthy say that the Russian wheat crop of 1898 is distinctly better than that of 1897, and that exports should therefore exceed those of the past season. These advices, I must confess, do not inspire in our minds a smaller confidence because they do not enter into exact statistics. I believe the yield of wheat in Russia this season to be 4,000,000 quarters larger than it was last year, and at this rate I expect a surplus of 20,000,000 would be disclosed.

The markets of the past few days have been steady for wheat, flour, Russian, American and British oats, and for best barley, dearer for rye, beans, maize, feeding barley and oilseeds, cheaper only for Irish oats, brewers' dried grains, maize, germ meal and English secondary malting barley. The sales of wheat flour and secondary malting barley have been below the average, but it is probable that, taking all articles together, the sales of feeding stuffs have been rather above the average. The price of British wheat is seldom lower than 26s or above 30s, so that the range this year is less than usual. California sorts are pretty generally priced at 32s, the finer Oregon sorts commanding a shilling above, and the yellow Walla Walla being parted with at a shilling below this value. The price of American No. 2 red winter is about 30s per quarter, and Liverpool quotes 6s 1d per cental. Liverpool also quotes fine No. 1 Northern spring at 6s 3d, No. 1 Bombay at 6s 1d, No. 2 Calcutta at 6s, and common Egyptian at 5s 6d per cental. In flour 30s is seldom made, only top-price London, special American patents, and, of course, Hungarian equal that level. Ordinary London town household flour is at 26s 6d, Cascade at 26s, Washburn superlative at 24s 3d, Pillsbury's best at 24s, and Iron Duke at 20s 3d per sack. Barley makes 17s for Russian up to 30s for Chilian best. The London average

is 29s 3d per quarter. Oats range from 15s for common Irish up to 27s for finest heavy New Zealand. The London average is 17s 4d. Maize makes 17s 6d for flat, 18s 6d for round, at most markets.

YORKSHIRE. AGRICOLA.

NEWS SUMMARY.

General.

The commission sent to Porto Rico to superintend the evacuation of the island has completed its work. The United States soldiers now in the island have been ordered home. It is said that 10,000 fresh troops will be sent to replace them.

The island of Porto Rico became an integral part of the United States last Tuesday. At noon on that day the American flag was hoisted on the forts and public buildings with all the honors due the occasion. General Brooke will govern the island until a plan of administration has been settled upon. The natives are well satisfied with the change.

Gen. Wade, who is president of the commission now in Cuba, announces that 6,000 Spanish soldiers have sailed for home and that 40,000 more will soon follow. The American commissioners are disposed to accept these movements as indications of good faith and believe that the evacuation will now be conducted as rapidly as the limited transportation facilities at Spain's command will allow. While it is probable that some of the Spanish soldiers will be obliged to remain until after December 1, it is the present purpose of this government to take full possession of the island on that date.

The Peace Jubilee celebration, held in Chicago during the early part of the present week, was successfully carried out despite inclement weather. A windstorm damaged or totally destroyed a number of the beautiful arches before the grand parade took place. However, this did not lessen interest in the parade, which occurred on Wednesday, and which is said to have been witnessed by larger crowds than was the great World's Fair parade six years ago. President McKinley was present, holding a number of receptions and responding to the toast, "Our Country," at the grand banquet Wednesday night. On Monday the University of Chicago conferred the degree of LL. D. upon President McKinley, he being the first who has thus been honored by that institution.

Farmer's Handy Feed Cooker.

We desire to call our readers' attention to the Farmer's Handy Feed Cooker, which is sold at the low price of \$12.50 for 50 gallon capacity.



By feeding poultry and stock with cooked food during the winter months, at least one-third of the food is saved. This Cooker will pay for itself in one week's time and is without doubt the best and cheapest on the market—just what its name implies, a Farmer's Handy Feed Cooker. Upon application to the Empire Manufacturing Co., Quincy, Ill., a catalogue, giving a full description, may be obtained. They are made in all sizes.

THE PEERLESS STOCK FOOD COOKER.

CONVENIENT AND GOOD. CHEAP AND ECONOMICAL. Material the best. The castings are from special high grades of iron and are guaranteed free from flaws, sand holes and cracks. Fine on inside of casing; throws flame around kettle. Casing is of extra heavy steel. Uses 1/4 fuel required by others, and fire is kept longer. Used out or indoors with as much safety as a stove. 50 % of food saved. Made for the best. Write for sizes and special prices.

GREENVILLE IMPLT. CO., Greenville, Mich.



CABLED POULTRY AND GARDEN FENCE

Cabled Field and Hog Fencing with and without lower cablebarbed. Steel Web Ficket Fence for Lawns and cemeteries. Steel Gates, posts, etc.

DE KALB FENCE CO., 52 High St., DE KALB, ILL.

THIS \$18.00 SORTER for \$5.00.

In order to introduce our Sorter where we have no agent, we will ship the first one for \$5. It is used for making 2 or 3 grades of Potatoes, Apples, Peaches, Oranges, Onions, etc. Send quick and get one at reduced rates. Circular free.

Hubert & Dickinson, Christians, Pa.

The Household.

CONDUCTED BY MRS. ELLA E. ROCKWOOD.

We should be pleased to have any of our readers who take an interest in household topics send in their views and opinions upon any subject which is under discussion, or which they wish discussed. The invitation is general, and we hope to see it accepted by many. Address all letters for The Household to Mrs. Ella E. Rockwood, Flint, Mich.

For The Michigan Farmer.

ONE WEEK'S WORK OF A WEAKLY WOMAN.

1. On Monday morning early her washing she begins, Close followed by the ironing, and mops out doors and in. Of meals to get and dishes to wash the half cannot be told; The hired girl that could do it couldn't be had for gold.

2. She picks and cans of currants ten quarts so rich and red; Then makes five quarts of jelly to spread upon their bread. She climbs the cherry trees and plucks the juicy fruit, With bark a-falling in her eyes, while the ladder slips, to boot.

3. Then through the berry patch she drags her weary feet, And looks the bushes over in spite of sun and heat. Forth to the huckleberry swamp her steps she faint must take, And fill her dishes to the brim until her back doth ache.

4. Then homeward hies to can them up, And boil the kettle, for the men must sup. There are chicks to feed and cream to churn— While the "crick" in her side takes another turn.

5. On Friday morning, clear and fine, She marshals her dishes into line. And cans and jams and jells and "jaws" Without a single rest or pause.

6. She mends and makes and bakes and stews, And dusts the house while the dinner brews. For everything must look its best As the next day is the day of rest.

7. But when the Sabbath morning breaks She lies abed and aches and aches; While at church that day they say, "Oh, dear, Why isn't that weakly woman here?" MRS. GRACE.

HOME CHATS WITH FARMERS' WIVES.

THE CARE OF THE SICK.

In the Household of October 1st our correspondent, V. I. M., wrote of a dear sister who is ill with consumption, and asked for suggestions in regard to preparing food for one suffering with that malady.

Over twenty years ago two members of our family, mother and daughter, were taken away with this dread disease in less than a year, and it sets my heartstrings quivering even now to see or hear of one afflicted in a like manner.

It is a labor of love to care for our dear ones when they are sick, yet sometimes we scarcely know what to do for their comfort, as we see them gradually fading away, each day becoming a little weaker, yet ever buoyed up with the delusion that they are getting better, a feature which is so characteristic of consumption.

Our correspondent asks for recipes for preparing dainty and appetizing dishes for her invalid. I do not know that I can give such from practical experience, since it was "Auntie" (our mother's sister) who always prepared the food for our dear ones during their sickness. I remember, though, that she always tried to surprise her charges with something least expected, which usually had the effect of exciting the fickle appetite into at least tasting the dish prepared. She never failed to try by every means in her power to tempt them to eat, hoping in this way to keep up their strength.

We know that the appetite of a sick person is capricious. What they think they will like does not taste good after they get it. Auntie used to keep pleasantly silent in regard to what they were to have to eat, instead of discussing the matter beforehand. The prettiest dishes, the daintiest napkin, was used in serving, for all these help to give zest to a meal, particularly when one does not care much whether they eat or not.

Every farmer's wife knows that it is not always easy to catch a chicken, and sometimes this difficulty prevents having potpie for dinner. Auntie was

a famous hand with a "slip-noose," and rarely failed to bag her game. At one time during Sister Mary's illness, which began almost immediately after our mother's death, she expressed a sudden desire for chicken broth. For ten days previously nothing of the kind had been relished, but on this particular morning it seemed to her that chicken broth would "taste so good." She could hear the young roosters crowing just outside the window at that minute. Auntie said not one encouraging word, but soon making an excuse to leave the room, softly stepped outside with slip-noose in hand. A few bread crumbs thrown down inside the fatal circle, a rush toward it on the part of the fowls, a quick jerk of the string and the game was fast, while the other hand quickly shut off the squawk which would have announced the capture to the one inside. Although such a feat as beheading a fowl had never before been attempted, it was accomplished that time, for not a man was about the place, and in a remarkably short space of time the invalid was surprised to see Auntie walk triumphantly and smilingly into the room, bearing a steaming bowl of broth upon a tray. Taken entirely by surprise, the invalid ate heartily of the meal, and declared that it did not seem more than five minutes since she heard that fowl crowing under her window.

It was the same dear invalid, too, who one day expressed a wish that she might see a nice large fowl all stuffed and baked to a turn. Auntie remembered the wish, and next day at dinner time bore into her room just such a fowl as she had described. Of course a very small portion of it sufficed to satisfy her appetite, the remainder being served at the family dinner. She had been confined to her room so long that merely the sight of such a dish pleased her.

When our loved ones are gone, it is a satisfaction to remember that we did everything in our power to please them. Nothing rankles in the heart like the thought of neglect or disregard of their wishes. Never again can they come back to us. Never again can we perform for them the little acts of kindly attention which mean so much to one who is sick. They may seem sometimes to be exacting and full of whims, but never mind, humor them. Keep good natured and cheery, and never allow the slightest discord to enter the sickroom.

Our thoughts will be frequently with V. I. M. and her invalid sister, the "Emerald" who used to write to the Household from Dakota. We bespeak for them and the entire family the heartfelt sympathy of our readers.

SAYINGS OF SMALL PEOPLE.

Cows and butter making were new to little 4-year-old Urvilla, when a neighbor moved next door who kept two cows. One day she astonished by asking: "Mr. —, which one of your cows gives buttermilk?"

At another time she watched the lady of the house working butter. As the brine oozed out she exclaimed, "Oh, my! see the juice!"

A dear little 2-year-old boy lives next door to us. He knew that his mamma had forbidden him to play with the shears. One day when at our home he came to me with them, and the request, "Auntie, put dese up high." A strong emphasis on the last word. We laughed, of course, but I thought, Dear little fellow, when you grow older if only you will be just as anxious to place temptation high out of your reach, what a grand thing it will be for you.

Majorie's papa is a minister. In Sunday school one day he arose to make some remarks on the lesson, when the little 2-year-old girl darted from her corner in the primary class, and ran up to him, saying, "Papa, papa, the bumble bee, the rooster crows and away he goes," then back she went to the corner again, but she made her speech first.

One day after returning from Sunday school her mamma asked her what the golden text was. Marjorie replied, "Oh, war news!"

Not long ago she came to her mamma, saying, "Mamma, I've eaten so many grapes; is there any paregoric around?" If she does not get to the table as soon as the others of the family, she says, "Now, papa, wait! don't pray till I get there."

CLARA BELL.

D. F.—I have always used the Magic dyes to color underwear as they are nonpoisonous and do not stain by perspiration.

A BUSY SUMMER FOR MRS. GRACE.

I want to thank Lucy B. for noticing my absence from the Household. There have been a good many long, weary days the past summer when I thought that if the ground should happen to open and swallow me no one but one "male man" (as Samantha Allen likes to call them) and two little olive branches would miss me. Possibly the schoolma'am might, about meal time, till she got another boarding place. I haven't had time to read the Household every week, could just snatch a few minutes to study the Sunday school lesson. I am real homesick to step in and see you all once more.

I have heard several people remark what a short summer it has been, but as I look back over all the hard work I have got through with I just say, praise the dear Lord for helping me through.

For the first time in twelve years my better half and myself took a vacation, spent a whole day in Detroit. I had heard so much about the big boats there that when I first saw them they looked much smaller than I expected. Not until I saw a train of cars run on to one of them did I get an idea of their size. An old battleship was anchored out in the river, looking deserted enough; only one small boy to be seen and he was fishing over one side of her.

We went to Belle Isle and saw the animals and quantities of the loveliest flowers, but what took the eyes of the gentlemen were the dozens of gray squirrels scampering about, whisking their tails saucily at us, so near and yet so far, for no one is allowed to harm them. The visit to the water-works was really the best of all. The huge machinery is larger and more perfect than anything we had ever dreamed of. It seemed as if we had found a world far in advance of the one we had formerly lived in. We found Wonderland entertaining, and a good place to rest after tramping over pavements for half a day. We visited some large stores and did some trading, getting some things cheaper and better than we could at home. The

ready made clothing that was a little out of season was very reasonable; other things were no cheaper than we could get them anywhere. Altogether we had a lovely day, one long to be remembered by poor stay-at-home farmers like ourselves.

My mending is the bugbear of my life. I do nearly all of it on the machine, and still it takes so much time. How do you mothers with a houseful of children ever get it done. Please tell us.

MRS. GRACE.

CORN MEAL MUSH AND OTHER THINGS.

This is how I make it. I place over the fire a kettle containing the amount of water I wish for my mush and salt it. When it boils I stir up with cold water about one-half of the meal I think I will need and pour it into the boiling water, stirring it often until it boils again. I let it cook slowly for fifteen or twenty minutes, when I prepare a portion of the remaining meal in the same way and stir it into the kettle, repeating this process until the mush is thick as desired, letting it boil ten or fifteen minutes between each addition. I like to cook mush slowly, but keep it on the stove from one to two hours. Made in this way, it will be free from lumps, and will not taste raw.

A little white sugar added to mashed turnips, say a teaspoonful to a tureen of turnips, improves their flavor, especially if they are inclined to be strong. The same is true of dried corn. Just enough sugar to taste like the natural sweet of the corn improves it. Hubbard squash is sometimes made better by adding a little sugar.

To prevent pickle beets from becoming too sour after being in sharp vinegar for two or three days, I dilute the vinegar, and add sugar before I cover the beets with it. This helps to keep the natural sweet of the beet.

M. A. S.

We have received a number of recipes for mustard pickles, all similar. Only a few of those first received have been printed, but our thanks are extended to all who so kindly responded to the call for recipes.

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SHORT STOPS.

E. J. C. writes: Children's school dresses and aprons are usually made of some kind of wash goods, and nothing could be prettier than many of the gingham, calicoes and percales which can be purchased at such reasonable prices nowadays. The colors are fresh and pretty, just suited to the youthful wearers, and if one is careful in washing them, almost any of them will retain their beauty a long while.

Do not soak colored clothes. Prepare a suds of water that is a little warmer than new milk, and dissolve a little borax in it. Rub them lightly and briskly; very little rubbing is necessary to get them clean when borax is used, and unlike lye and sal soda, it does not injure the color or fabric. Rinse through two waters, then dip each piece in a good boiled starch that has been allowed to cool until it is only lukewarm. Hang them in the shade to dry. Every part of the work should be done as quickly as possible, so that they will not be wet any longer than necessary. This method of washing is excellent for any color, the darkest and most delicate shades retaining their beauty by its use.

Mrs. Starkey's Daughter writes: It is important that our social obligations be met as well as our financial ones. When old Mrs. MacGreggor moved to the shire town she was the recipient of invitations the whole winter, but she wouldn't "pay back" these social courtesies, and her name was afterwards dropped. She was hurt, but was too dishonest to make a tea party, as she should have done. This is the cheapest way of entertaining in country or town. In my former home it was customary for two or three friends to join together and give a reception. Three sisters-in-law did so, for their houses were side by side. The company assembled at one that was large and the middle house served as a dining room. Carpet was laid down as a walk between and all was nice. For refreshments, one baked the cake for her share, three kinds. Another furnished the bread, graham and white, coffee, pickles and butter; the third added the cold ham, chicken salad and ice cream. The three husbands were brothers, and grocers, too, so they laughingly gave fruit. It was little expense, for they were all in modest circumstances, but they were able to entertain fifty ladies and "paid back" a lot of social debts.

Lillie Rice Stahl writes: Little girls can do many things that are not hard work but a help to Mamma. If I had a little girl I would have her rip up some sheets that are "giving" in the middle and have the stronger sides sewed together. She could "run" the paraffine wax over some jelly that wants to mould. Once a week she might peek around among the canned fruits and see if any need re-heating. She could gather the flower seeds and dry them. She could pick the seeds from the cucumbers that lie on the spring house roof. The little girl could also chop up for the fowls some burst cabbages. The sunflower seed might be gathered. I should have her watch that sneaking hen that is suspected of having stolen its nest. I have gathered the parsley twice and dried and "bagged" it for winter. More might be picked and dried. A little girl could sweep up the dead leaves and acorns from about the summer kitchen stoop. Those old blankets could be cut down the center and the stronger outsides seamed together, which would allow them to wear a good while longer. The worn-out blankets might be cut into suitable sizes for certain purposes. Handy for baby's crib; good to wrap around grandma's cold feet, or handy to wrap up feeble, chilly chickens that sometimes need to be cared for. There is plenty of work for little girls to do.

THE BAY VIEW READING CIRCLE.

It will soon be time (November 1st) to begin the course of reading for the ensuing year. This year the Circle offers a course of delightful studies on the theme of the hour—Spain, and also Modern France. This organization is making a great reputation with its course of short and popular studies. For present or proposed literary clubs or for private study there is nothing better.

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PREPARED MUSTARD.

One-half cup mustard, rubbed smooth with cold water, one tablespoonful sugar, one tablespoonful salt, piece of butter about the size of a hickory nut. Boil until it thickens, stirring constantly. Remove from the fire and thin with vinegar. This will make about a pint. Will keep for a long time in a cool place, and improves with age.

MRS. E. R. F.

Two tablespoonfuls of mustard, one tablespoonful of flour. Mix dry with one tablespoonful each sugar and salt, one-half cup vinegar and one-half cup water stirred into it. Cook till like custard.

MRS. WM. JENISON.

DISHWASHING.

You may say anyone can wash dishes, but anyone cannot wash them as they should be washed. A good many times I have eaten in houses where the china was streaked, the glassware clouded, teacups stained and dirt accumulated around the handles, the sugar bowl adorned more or less with flyspecks, and I could picture in my mind how her pans and pots were incrustated in the corners, and greasy to the touch.

Dishwashing is an art not to be slighted. The dishes should be as fine

as circumstances will afford. One may think there are so many things awaiting her that she must hurry through with her dishes, but she should at least wash them clean and dry them smoothly. In too many homes they are given a "lick and promise" when it does not take any longer to wash them properly. All one needs to do this is a dishpan, plenty of hot water (soap, a dishcloth, a pan to drain them in, and clean towels to wipe them with. A wire dishcloth and a dish mop are handy, but not essential. In clearing the table scrape the dishes and pile each of a kind together, and not "helter skelter" and covered with crumbs. Knives and forks should not be put together, as they scratch one another. The glassware should be done first, the silver next, the cups and saucers next, then the dishes that are not greasy, and next the plates, and last the kitchen dishes.

It is best not to risk the choice china with the "help;" one that appreciates and knows their value should wash them. Do not hold a dish in the bare hand when wiping it, but put the towel over the hand, or there will be finger marks. Do not leave the sticky dishes to soak till next time, but when you take out the food put cold water into the dish and it will be ready to wash when you get to it. If the water is hard use a little washing soda. When done with the dishes wash out the

cloths, put them to dry, wash the hands thoroughly, rub them with rose water and glycerine, and your hands will receive no bad effects from dishwashing.

ELIZABETH GRIFFIN.

CONTRIBUTED RECIPES.

Chili Sauce.—Peel 18 large ripe tomatoes and chop them. Then add two and one-half cups of vinegar, one cup of brown sugar, one teaspoonful of every kind of spice, two teaspoonfuls of salt, one green pepper and one large onion chopped fine. Boil two and one-half hours.

Tomato Catsup.—One bushel ripe tomatoes. Wash and slice them, and boil until tender. Strain through a wire sieve, rub all you can through with your hand. Throw away seeds and skins, then take the juice and pulp and boil until thick. Tie these spices in a muslin bag, one-half cup whole allspice, one-half cup stick cinnamon, one teaspoonful whole cloves, one-half nutmeg, grated. Boil with tomatoes. Add salt, red pepper and sugar to taste after it is boiled as thick as you wish it. This needs to be in cans sealed, the same as fruit. If you haven't the cans take large-mouthed bottles and seal over the cork with light-brown paper with the white of an egg.

M. K.



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Legal Department

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Joint and Several Note.—W. B., Ber-
vill, Mich.—“Ninety days after date
we jointly and severally promise to
pay.” Can I collect of one or both of
the signers?—Both of the signers are
individually liable for the entire
amount of the note.

Land Contract Not Subject to Revenue Tax.—L. H., Chelsea, Mich.—I
sold a piece of land on contract. How
many cents' worth of stamps must I
put on the contract?—A land contract
is an agreement for the sale and pur-
chase of land which, under the rulings
of the commissioner, is not subject to
the revenue tax.

Question on Matter in Litigation.—
Subscriber, Imlay City, Mich.—It is
not our custom to pass upon the merits
of matters in litigation. A lawsuit is
always uncertain, and an opinion on its
merits, based on the statement of
either party alone, would be hazard-
ous and of little value.

Mortgage foreclosure.—A. H. P., Ot-
tawa Co., Mich.—A man owned 40
acres of land and bought 40 acres
more, giving a mortgage on both. Af-
terward he deeded the second 40 to his
son, giving a new mortgage signed by
son and wife. The son refused to pay
principal or interest. If the father
sells his interest to the man who holds
the mortgage, and he forecloses, can
the son redeem his 40? Will he be
obliged to pay the whole of the mort-
gage?—The transaction as outlined
above is unusual, but the son, having
the title and giving the mortgage,
stands toward the mortgaged premises
in the same relation as he would if
his father had not signed the mortgage
and note, and may redeem the prem-
ises under foreclosure, and must pay
the principal and interest. The father
would be responsible on proceedings
on the note alone, or, in case of mort-
gage foreclosure, for any deficiency,
i. e., for the difference between the
amount realized on the land and the
amount due on the mortgage.

Abstracts of Title.—C. M., Cold-
water, Mich.—When buying land is it
necessary to have an abstract of title?
—It is not necessary to have an ab-
stract, but it is always prudent to have
a complete abstract, and to have it ex-
amined by some competent attorney,
taking his certificate that the abstract
shows acceptable title. The maker of
the abstract is responsible to you for
the completeness and accuracy of his
work, and the attorney's examination
will disclose any defects in the title it-
self. If one buys land and gives a
valuable consideration for it, he should
be sure that he receives a perfect title.
The title might be so defective that
you would lose the land, and have no
redress except against the seller, who
may have become financially irrespon-
sible. Again the title may be defective
and the purchaser may be undisturbed
in his possession, yet, should he desire
to sell, the flaw may prevent a sale,
and be the cause of great annoyance
and considerable cost. Every would-
be purchaser should protect himself
beforehand by insisting on an abstract
to date of sale, and having the same
carefully examined.

Fence Complication.—J. B., Wash-
tenaw County, Mich.—A and B own
adjoining farms. The partition fence
between them is 160 rods long, of
which each maintains one-half. D has
a good fence on his half, while B has
a poor one. B sells his farm to C and
D and the farm is divided crosswise,
D getting the part adjoining A's good
fence, and C getting part next to B's
poor fence. Now C wants A to build
40 rods of his poor fence. A offers to
compromise with D and have him
build the 40 rods on C's part, but D
refuses. A then threatens to remove
half of D's fence, and fix up C's half,
but D refuses. Can A do this or not?
—If the fence between A and B was
divided by written agreement and the
same filed with the township clerk, or
if the fence was divided and assigned
by the fence viewers, and the assign-
ment filed with the township clerk, the
duty to maintain the fence as divided
would be binding on A and B and their
successors and assigns. In that case
C and D would have purchased the
land subject to that agreement, and C
would be required to maintain all that
part of the fence which B originally
maintained, and D would have no

fence to keep up, for A and his suc-
cessors would be required to keep up
that part of the fence. In the absence
of such agreement or assignment the
fence would be subject to a re-division,
and A and C would divide the fence
between them, each maintaining half,
and A and D would likewise divide the
fence on their line. If you cannot
agree as to the method and manner of
division, call in the fence viewers.

The Markets.

WHEAT.

The course of the market the past week
has been steadily but slowly upward. The
advance seems to be fully justified by ex-
isting conditions, and is not the result of
speculation. In fact speculative dealings
are unusually light for this season of the
year. In this market receipts are very
light, hence millers are finding difficulty
in securing what grain they require. Ex-
porters are purchasing liberally, and their
activity is the great factor in advancing
values. Foreign grain is generally
firm and higher than a week ago. Liver-
pool has ruled very strong most of the
week. Thursday the market is stronger
than ever, the possibilities of war being
deemed greater than before. The result of
the war scare was a strong advance in
foreign markets, Liverpool quoting prices
3½¢ higher than the previous day. This
started up American markets, and
all of them closed at the highest point
for a number of weeks.

The following table exhibits the daily
closing sales of spot wheat in this market
from October 1 to October 20:

	No. 1	No. 2	No. 1 Mixed	Red	White	Red	White
Oct. 1	66½	66	65½	65½	65½	65½	65½
" 2	66½	66	65½	65½	65½	65½	65½
" 3	66½	66	65½	65½	65½	65½	65½
" 4	66½	66	65½	65½	65½	65½	65½
" 5	66½	66	65½	65½	65½	65½	65½
" 6	66½	66	65½	65½	65½	65½	65½
" 7	66½	66	65½	65½	65½	65½	65½
" 8	66½	66	65½	65½	65½	65½	65½
" 9	66½	66	65½	65½	65½	65½	65½
" 10	66½	66	65½	65½	65½	65½	65½
" 11	66½	66	65½	65½	65½	65½	65½
" 12	66½	66	65½	65½	65½	65½	65½
" 13	66½	66	65½	65½	65½	65½	65½
" 14	66½	66	65½	65½	65½	65½	65½
" 15	66½	66	65½	65½	65½	65½	65½
" 16	66½	66	65½	65½	65½	65½	65½
" 17	66½	66	65½	65½	65½	65½	65½
" 18	66½	66	65½	65½	65½	65½	65½
" 19	66½	66	65½	65½	65½	65½	65½
" 20	66½	66	65½	65½	65½	65½	65½

The following is the record of the closing
prices on the various deals in futures
each day during the week:

	Dec.	May.
Friday	67½	68½
Saturday	67½	68½
Monday	67½	68½
Tuesday	67½	68½
Wednesday	67½	68½
Thursday	67½	68½

The visible supply of wheat in the
United States and Canada on Saturday
last was 14,588,000 bu, as compared with
12,210,000 bu the previous week, and 23,930,
000 at the corresponding date in 1897. The
increase for the week was 2,378,000 bu.

The London Times crop report says:
“Wheat crop has had a brilliant finish,
average condition or prospective yield
being 103.5, against 102.3 on September 1,
88.5 on October 1 last year, and 104.9 in 1896.
The crop of the United Kingdom is esti-
mated at 76,000,000 bu.”

The N. Y. Commercial says: The statis-
tics of foreign wheat supplies leave no
doubt that, even should advancing prices
bring grain out of farmers' hands with in-
creased freedom, the deficiency in
Europe's normal stocks of the chief
breadstuffs is calculated to create an ab-
sorbing power fully equal to taking care
of whatever surplus the United States
may have over domestic consumptive re-
quirements, plus the amount needed to
restore our depleted visible supplies
to normal proportions.

The speculative dealing in wheat is very
light, and the demand really fixes values
at present. A few speculators on the bull
side would quickly change the tone of the
market.

The belief that Russia is concentrating
a large force of soldiers, said to be 40,000,
in northern China, helped the market
the past week, as it was believed that
the British government would not remain
an idle spectator of further Russian ag-
gression in that kingdom.

Argentina's government estimates show
that the crops of wheat and maize prom-
ise excellent returns. The damage caused
by locusts is insignificant this year, and
there will be a large surplus, it is
thought, for export.

An elevator man at Winona, Minn., is
responsible for the following statement:
“I am surprised at our purchases of
wheat. They are very light, and still
farmers are hauling in their wheat. They
are storing 70 per cent of their deliveries.
The banks are loaning them money at
low rates of interest on their storage
tickets. They seem to be very bullish,
and an advance of 2c or 3c in the country
does not tempt them to sell.”

A Chicago grain dealer says of the mar-
ket: “We think the trade ignores the
fundamental fact that this demand and
our consumption have been sufficient to
prevent any accumulation of stocks in
commercial channels, now almost the
middle of October. This is unprecedented
we think. Two firms in Minneapolis sold
65,000 bbls. of flour yesterday, one-half for
export.”

The Minneapolis Market Record says:
“So far the sales of wheat by farmers in
the northwest have exceeded the sales of
last year for the same period by some-
thing like 6,000,000 bu.”

Argentina has exported 15,244,000 bu. of
corn since Jan. 1st, as compared with 10,
335,000 bu. for the corresponding period
last year.

A Buenos Ayres cable says: “Govern-
ment estimate shows that wheat and corn
crops promise excellent returns. Locusts
light this year, and there will be a large
surplus, it is thought, for export.”

DAIRY PRODUCTS.

BUTTER.

The market is a very steady one, with
an undertone of strength in the better
grades that is likely to cause some ad-
vance in prices. Receipts are only fair in
quantity, and a good deal of them are
decidedly poor in quality. Even some
lots of creamery examined the past week
were off in flavor, with the appearance of
having been made during the late hot
spell. Present conditions should be quite
favorable for butter-making. Pastures are
in good shape, and have not been injured
to any extent. The cool weather has put
and end to the pest of flies, and cows
should be doing well. Quotations in this
market are as follows: Creamery, 20¢@21¢;
fancy dairy, 17¢@19¢; fair to good, 14¢@16¢;
common grades, 12¢@13¢; low grades, 9¢
@10¢ per lb. At Chicago the market is firm at
an advance since a week ago, and the
outlook seems quite favorable for the ad-
vance to be maintained. Quotations in
this market are as follows: Creameries,
extras, 21¢@22¢; firsts, 19¢@20¢; seconds,
15¢@17¢. Dairies, extras, 18¢@19¢; firsts, 14¢
@15¢; No. 2, 12¢@13¢. Ladies, extras, 12¢
@13¢. Packing stock, 11¢@12¢. The New
York market has made a substantial
gain on choice and fancy grades of fresh
table butter, and, while the demand has
not been specially active, there has been
call for all the stock that was on offer.
Receipts have been very light of these
high-grade goods, and prices have been
Western producing sections indicate so
small an output of the creameries that
we can hardly expect much increase until
the winter dairy season commences. The
market is firm at the advance noted in
quotations. For the lower qualities there
is not much demand, and they do not
share in the strong position held by the
finer grades. Quotations are as follows:
Creamery, Western, extras, per lb. 22¢@23¢;
do firsts, 20¢@21¢; do thirds to seconds, 15¢
@16¢; do State, extras, 21¢@22¢; do
firsts, 19¢@20¢; do thirds to seconds, 15¢
@16¢; Western, dairy, extras, 19¢@20¢;
do seconds to firsts, 17¢@18¢; State dairy,
half-firkin tubs, finest, 19¢; do firsts, 16¢
@18¢; do thirds to seconds, 14¢@16¢; State
dairy, firkins, fancy, 18¢; do seconds to
firsts, 15¢@17¢; Western imitation cream-
ery, finest, 16¢@17¢; do firsts, 14¢@15¢;
do seconds, 13¢@14¢; Western dairy, finest,
15¢@16¢; do thirds to firsts, 12¢@14¢; fac-
tory, June, extras, 14¢; do seconds to
firsts, 13¢@14¢; do current packed, finest,
13¢@14¢; do seconds, 12¢@13¢; do lower
grades, 11¢@12¢.

CHEESE.

The market has been without features
of interest since our last report. In this
market no change in values has occurred,
and the best full creams are still selling
at 9¢@9½¢ per lb., with a quiet market.
At Chicago there have been a few
changes in the range of prices, and young
Americans, Swiss and Limburger are
slightly higher; cheddars and brick
cheese are quiet and unchanged. Quota-
tions in this market are as follows:
Young Americans, 8¢@9½¢; twins, 7¢@
8½¢; cheddars, 8¢; Swiss, 8¢@10½¢; Lim-
burger, 5¢@7¢; brick, 6¢@8¢. The New York
market is quiet, and values are generally
held at the same range as a week ago.
The N. Y. Tribune says in its review of
the market this week: “The compara-
tively moderate supplies have enabled
holders to clean up strictly fancy large
cheese fairly well and hold prices about
steady, though toward the close there is
some what of an unsettled feeling, in
sympathy with lower prices in the country
and decidedly weaker Canadian ad-
vices. Toward the latter part of last
week 8¢ was occasionally reached for
exceptionally fancy large cheese, both
colored and white, but buyers at that
were particular regarding quality and
average finest grades were impossible to
sell above 8½¢, while considerable lots of
really choice cheese that on a quick mar-
ket would have passed as fancy without
difficulty were let go at 8¢. So far this
week the demand has been quite light,
and, while 8½¢ has been obtained in ex-
ceptional instances for fancy cheese un-
der special quotations, that price is evi-
dently extreme, and 8¢ all that can be
depended upon, with, in fact, only a
moderate outlet at that. Quotations in
this market are as follows: State, full
cream, large, colored, white, fancy, per
lb. 8½¢; do colored and white, choice,
8¢@8½¢; do good to prime, 8¢@8½¢; do
common to fair, 7¢@7½¢; do small, colored,
fancy, 9¢; do small, white, fancy, 9¢; do
good choice, 8¢@8½¢; do common to
fair, 7¢@8¢; light skims, small, choice, 6½¢
@7¢; do large, choice, 6¢@6½¢; part
skims, small, choice, 6¢@6½¢; do large,
choice, 5½¢@6½¢; do good to prime, 4½¢
@5¢; do common to fair, 3½¢@4¢; full skims,
2½¢@3¢.

At Liverpool, on Thursday, the mar-
ket was quoted firm at 42s 6d per cwt for
both white and colored American cheese,
the same figures quoted one week ago.

DETROIT PRODUCE MARKET.

Detroit, October 20, 1898.

FLOUR.—Quotations on jobbers' lots in
barrels are as follows:
Straights \$3.50
Clear 3.25
Patent Michigan 4.00
Low Grade 3.00
Rye 3.00

CORN.—The visible supply of this grain
on Saturday last in the United States and
Canada was 24,583,000 bu, as compared
with 22,202,000 bu the previous week, and
40,497,000 bu at the corresponding date in
1897. Quotations in this market are as
follows: No. 2, 34¢; No. 3, 33¢; No. 2 yellow,
34¢; No. 3 yellow, 33¢; market firm.

OATS.—The visible supply of this grain
in the United States and Canada on Sat-
urday last was 6,080,000 bu, as compared
with 5,469,000 bu the previous week, and
14,322,000 bu at the corresponding date in
1897. Quotations in this market are as
follows: No. 2 white, 27¢; No. 3 white,
26¢; market firm.

RYE.—The visible supply of this grain
in the United States and Canada on Sat-
urday last was 1,308,000 bu as compared
with 715,000 bu the previous week, and
3,160,000 bu at the corresponding date in
1897. No. 2 selling at 53¢ per bu and firm.

BARLEY.—Market higher and firm;
now quoted at 89¢@94¢ per cwt for good
samples.

FEED.—Bran, \$12; coarse middlings,
\$13; fine middlings, \$14; cracked corn, \$15;

coarse cornmeal, \$14; corn and oat chop,
\$13 per ton in jobbing lots.

BEANS.—Market firm at an advance.
October delivery quoted at \$1.05@1.06; No-
vember, \$1.05; December, \$1.05.

CLOVER SEED.—Higher; prime now
selling at \$4.75 for spot, \$4.75 for October
delivery, and \$4.82½ for March. No. 2
quoted at \$3.75@4.40. Alsike selling at \$3.50
@4.50 per bu.

APPLES.—Best winter fruit, \$2.25@2.50
per bbl; fall apples, \$1.50@1.75 per bbl.

PEACHES.—Yellow, \$2.50; good, \$1.75@
2 per bu.

CRABAPPLES.—\$1.75@2 per bu.

PEARS.—Duchess, 35¢@50¢ per bu.

GRAPES.—Concord, \$12@13 for 100 9-lb
baskets; Niagara, \$15@16 per 100 7-lb bas-
kets; Catawba, 2c per lb.

CABBAGE.—Quoted at \$2.50 per ton in
large lots, and 20¢@50¢ per doz on the city
market.

EGGS.—15¢ per doz for fresh receipts,
16¢ for candled.

HIDES.—No change in the range of
prices. Quoted as follows: No. 1 green,
7½¢; No. 2 green, 6½¢; No. 1 cured, 9¢; No. 2
cured, 8¢; No. 1 green calf, 10¢; No. 2
green calf, 8½¢; No. 1 kip, 7½¢; No. 2 kip,
8¢; sheepskins, as to wool, 40¢@70¢; shear-
lings, 10¢@50¢.

HONEY.—Comb, choice, 9¢@10¢; fancy
white, 11¢@12¢ per lb.

ONIONS.—Selling at 35¢@40¢ per bu on
market, and jobbers quote 35¢ in large
lots.

POTATOES.—Market quiet and steady.
Jobbers are quoting 35¢@40¢ per car load
lots, and farmers are realizing 40¢@45¢ on
city market.

LIVE POULTRY.—Quoted as follows:
Spring chickens, 7¢@7½¢; fowls, 6¢@7¢;
ducks, 6¢@7¢; geese, 6¢@6½¢; turkeys, 8¢@9¢
per lb.

BALED HAY AND STRAW.—Best tim-
othy, in car lots, \$8@8.50 per ton; rye
straw, \$5.00; wheat and oat straw, \$4.50.

WOOL.—Nominal quotations in interior
markets are as follows: Unwashed fine,
14¢@15¢; washed fine, 19¢@20¢; unwashed
medium, 18¢@20¢; washed medium, 22¢@25¢
per lb.

OILS.—Market for linseed and lard oils
firm; turpentine higher. Latest quota-
tions are as follows: Raw linseed, 33¢;
boiled linseed, 34¢, less 1c for cash; extra
lard oil, 50¢; No. 1 lard oil, 35¢; water white
kerosene, 8½¢; fancy grade, 11¢; deodor-
ized stove gasoline, 8½¢; turpentine, 30¢
per gal in bbl lots.

PROVISIONS.—Market quiet and
steady, with but few changes. Quotations
are as follows: Mess pork, \$10.25 per bbl;
short cut mess, \$12; short clear, \$11.50;
compound lard, 4½¢; family lard, 5½¢;
kettle lard, 6½¢; smoked hams, 8¢@9¢;
bacon, 8¢@8½¢; shoulders, 6¢; picnic hams,
6¢ per lb.

COFFEE.—No change in values since a
week ago. Quotations are as follows:
Roasted Rio, ordinary, 9c, fair 11c; San-
tos, good 14c, choice 15c; Maracabo, 20¢
@25¢; Java, 20¢@30¢; Mocha, 28¢@32¢; package
coffee sold on the equality plan on a basis
of \$5.00@10.50, less 75¢ per 100-lb case, in
New York.

HARDWARE.—Market steady at the
following ranges: Wire nails, \$1.55; steel
cut nails, \$1.50 per cwt, new card; axes,
single bit, bronze, \$5; double bit, bronze,
\$8.50; single bit, solid steel, \$6; double bit,
solid steel, \$9.50 per doz; bar iron, \$1.35;
carriage bolts, 75¢ per cent off list; tire
bolts, 70 and 10 per cent off list; painted
barbed wire, \$1.65; galvanized, \$1.95 per cwt;
single and double strength glass, 80 and
90 per cent off new list; sheet iron, No. 24,
\$2.50 per cwt; galvanized, 75 and 10 per
cent off list; No. 5 annealed wire, \$1.45
rates.

DETROIT LIVE STOCK MARKET.

Michigan Central Stock Yards.

Thursday, Oct. 20, 1898.

CATTLE.

Receipts Thursday, 778, as compared
with 655 one week ago. The quality aver-
aged about the same as for the last few
weeks. Market fairly active; good handy
butchers steady, stockers and common
butchers closed rather slow and weak to
shade lower. \$4.00 was top price to-day
for good butcher, av. 1193 lbs., and \$4.50
for 9 do av 1107 lbs., but the bulk changed
hands at prices ranging from \$3.35 to \$3.80;
fair to good fat butcher cows, \$2.75 to \$3.50;
common, \$2.00 @2.25; bulls, light to good
butchers, \$2.75 to \$3.25; stockers \$3.35 to
\$3.85. Veal calves—receipts, 115; one week
ago, 139; active at \$5.75 to \$6.75 per 100 lbs.;
a few choice sold early brought \$7.00.
Milch cows and springers active at \$30 to
\$55 each; sales mostly at \$35 to \$45; one
extra good brought \$60.

Thorburn sold Sullivan a bull weighing
1040 at \$3.50 mixed butchers to Marx at \$36
at \$3.70 and 2 fat cows av 1175 at \$3.20, also
5 steers to Mich Beef Co av 1002 at \$4.25.
Hogan sold Jerow 7 stockers av 680 at
\$3.60.

Ed Clark sold Fry 13 mixed butchers av
677 at \$3.60.

Brewer & B sold Magee 9 mixed butch-
ers av 733 at \$3.50 and 7 stockers to Ford
av 713 at \$3.65.

Proper sold Schleicher 2 bulls av 720 at
\$3.00, 5 mixed butchers av 710 at \$3.40 and
9 stockers to Mason & F av 583 at \$3.50.

Haley sold Schleicher 17 mixed butchers
av 700 at \$3.50.

Pinkney sold Mason & F 14 mixed av 714
at \$3.50.

Burden sold Wreford 6 mixed butchers
av 690 at \$3.35.

Haley sold Sullivan 3 stockers av 603 at
\$3.65, 4 mixed av 962 at \$3.00, 3 steers av 948
at \$4.40 and one weighing 1220 at \$3.75.

Mayers sold Mason & F 6 steers av 711
at \$3.70.

Ackley sold same 4 cows av 1142 at \$3.35
and 2 bulls av 800 at \$3.00.

McLaren sold Clancey 5 cows av 923 at
\$2.00.

Hawley sold Sullivan 2 steers av 755 at
\$3.80 and a heifer to Mich Beef Co weigh-
ing 850 at \$3.75.

Bergen sold Sullivan 4 steers av 650 at
\$3.60, a cow weighing 1390 at \$3.25 and a
bull to Mich Beef Co weighing 1130 at \$3.15.

Belhimer sold Sullivan 4 steers av 1107 at
\$4.45 and 6 mixed butchers to J Wreford
av 750 at \$3.60.

Glenn sold Sullivan 4 steers av 592 at
\$3.50, 4 light butchers to Regan av 512 at
\$3.15 and 6 cows to Magee av 880 at \$2.70.

Young sold McIntyre 2 steers av 775 at
\$3.75.

B

Kalahan sold same 2 heifers av 800 at \$3.85 and a cow weighing 1080 at \$3.00.
Spicer & M sold same 2 F 2 bulls av 750 at \$2.90, 7 stockers av 440 at \$3.50 and 2 bulls av 470 at \$3.00.

Ackley sold Fitzpatrick 5 cows av 1122 at \$3.00, 6 mixed butchers to Mich Beef Co av 840 at \$3.75 and 9 steers av 1193 at \$4.60.

Spicer & M sold Sullivan 2 heifers av 885 at \$3.90, a cow weighing 1080 at \$2.60, 3 stockers to Burgess av 576 at \$3.75 and 5 heifers to Roe & Holmes av 573 at \$3.35.

Lewis sold Sullivan 13 mixed av 718 at \$3.80, 2 cows to Jerow av 890 at \$3.50 and 6 stockers to Mason & F av 636 at \$3.50.

H H Howe sold Fitzpatrick 3 mixed butchers av 926 at \$3.85 and 2 cows av 1125 at \$3.00.

Spicer & M sold Sullivan 4 mixed butchers av 900 at \$3.50, 2 stockers to Roe & Holmes av 575 at \$3.40, 16 stockers to Burgess av 575 at \$3.75, 2 cows to Regan av 780 at \$2.90 and 18 mixed butchers to Kammen av 690 at \$3.50.

Robb sold Sullivan 2 steers av 995 at \$4.25.

Bunnell sold Mich Beef Co 4 mixed butchers av 632 at \$3.50.

Burden sold Magee 7 mixed butchers av 674 at \$3.15.

Mayers sold Fitzpatrick 2 steers av 815 at \$4.00 and 5 mixed butchers av 706 at \$3.40.

Tubbs sold same 5 mixed butchers av 790 at \$3.70.

Patrick sold Sullivan 3 cows av 1106 at \$3.00, 1 do weighing 1000 at \$2.40 and 10 stockers av 681 at \$3.55, also 12 mixed butchers to Mich Beef Co av 700 at \$3.60.

Belhimer sold Ford 3 feeders av 856 at \$3.70.

Clark sold same 11 feeders av 773 at \$3.70.

SHEEP AND LAMBS.

Receipts Thursday, 1,382; one week ago, 1,696. Market fairly active; lambs sold 15c to 20c, mixed lots 10c to 15c lower than last Friday. Range of prices: Good lambs, \$5.10 to \$5.25; light to good, \$4.65 to \$5.00; good mixed lots, \$4.00 to \$4.90; fair to good butchers, \$3.00 to \$3.85; common, \$2.50 to \$2.90.

Bergen sold Caplis 20 sheep av 87 at \$3.00, and 74 lambs to Mich Beef Co av 66 at \$5.00.

Robb sold Kamman 12 sheep av 77 at \$3.00.

Roe & Holmes sold Robinson, 32 lambs av 61 at \$5.00 and 18 sheep av 90 at \$3.75.

Howe sold Mich Beef Co 28 mixed av 89 at \$3.75.

McLaren sold Young 21 lambs av 74 at \$5.15.

White sold Hiser 12 lambs av 64 at \$5.00.

Clark sold Sullivan Beef Co 50 mixed av 74 at \$3.80.

Reason sold Monaghan 36 mixed av 71 at \$4.00, and 20 culls to Hiser av 72 at \$2.50.

Burden sold Young 14 lambs av 73 at \$5.00, and 22 mixed av 87 at \$4.50.

Shook sold Mich Beef Co 39 lambs av 65 at \$4.85.

Spicer & M sold same 56 lambs av 74, 45 do av 73 and 50 do av 75 at \$5.10, 17 do av 75 at \$5.00, 16 mixed av 91 at \$3.75, 13 do av 80 at \$3.00, and 26 do av 87 at \$2.75.

Pinkney sold same 44 lambs av 63 at \$5.00, and 21 do av 70 at \$4.75.

Hope sold Mich Beef Co 79 lambs av 60 at \$5.00.

Clark sold Fitzpatrick 106 mixed av 77 at \$3.85.

Hawley sold Mich Beef Co 39 mixed av 70 at \$4.00.

Glenn sold same 10 lambs av 46 at \$4.00, and 85 do av 65 at \$5.00.

Bennett sold Monaghan 31 lambs av 63 at \$4.90.

Sharp sold same 41 common av 75 at \$2.70.

Rutherford sold same 23 lambs av 74 at \$5.00.

Kalahan sold Mich Beef Co 45 lambs av 71 at \$5.00.

Shelton sold Sullivan Beef Co 24 lambs av 80 at \$5.10.

HOGS.

Receipts Thursday, 5,436, as compared with 5,003 one week ago. Market fairly active. Fair to good mixed butchers about steady with last Friday's prices; pigs sold higher. Range of prices: \$3.50 to \$3.70, bulk at \$3.60; pigs, \$3.25 to \$3.40; stags, one-third off; roughs, \$2.90 to \$3.00, closing firm.

McLaren sold Hammond, S & Co 15 av 192 at \$3.60.

Spicer & M sold same 35 av 204 at \$3.62%, 28 av 197 at \$3.60, 39 av 179 at \$3.55, 28 av 190 at \$3.57%, and 84 av 154 at \$3.50.

Belhimer sold same 52 av 215 on p. t. Rook sold same 62 av 197 at \$3.62%.

Spencer sold same 86 av 200 at \$3.62%.

Lomason sold same 60 av 250 at \$3.70.

Glenn sold same 103 pigs av 95 at \$3.35.

Kalahan sold same 42 av 190 and 47 av 191 at \$3.55.

Adams sold same 129 av 181 at \$3.60.

McHugh sold same 163 av 183 at \$3.60, and 84 av 178 at \$3.55.

Bergen sold same 54 av 201 at \$3.57%.

Thorburn sold same 36 av 176 at \$3.55.

Roe & Holmes sold same 131 av 174 at \$3.62%, and 135 av 207 at \$3.65.

Rutherford sold same 53 av 154 at \$3.47%.

Phillips sold same 10 av 269 at \$3.57%.

Pinkney sold same 102 av 192 at \$3.60.

Hawley sold Sullivan 71 av 180 at \$3.60, and 23 av 128 at \$3.30.

Stephens sold same 48 av 107 at \$3.30, and 43 av 184 at \$3.60; also 77 av 190 at \$3.60.

Weidman sold same 67 av 182 at \$3.60.

Taft & Tubbs sold same 38 av 171 at \$3.60.

Bennett sold same 32 av 159 at \$3.40.

Clark sold same 15 av 162 at \$3.55.

Young sold same 84 av 168 at \$3.50.

Howe sold same 64 av 178 at \$3.62%.

Mayer sold same 45 av 140 at \$3.45.

Patrick sold same 12 av 119 at \$3.35.

Haley sold same 64 av 162 at \$3.50, and 49 av 152 at \$3.40.

Roe & Holmes sold same 198 av 139, 67 av 138 and 37 av 114 at \$3.50.

Nichols sold Parker, Webb & Co 131 av 166 and 69 av 149 at \$3.57%.

Lewis sold same 23 av 197 at \$3.50.

Shelton sold same 109 av 189 at \$3.60.

Patrick sold same 98 av 176 at \$3.60.

Pline sold same 137 av 221 at \$3.60.

Hogan sold same 114 av 188 at \$3.57%.

White sold same 111 av 187 at \$3.60.

Spicer & M sold same 31 av 208 at \$3.60.

Friday, October 21, 1898.

CATTLE.

Receipts Friday, 348, as compared with 308 one week ago. The quality was not very good, mostly common to fair mixed butchers and stockers. Market opened fairly active, but at the close was slow

and weak to 10c lower than prices paid one week ago. \$4.25 was top price to-day for 7 fair quality butcher steers av 1077 lbs, and \$4.20 for 10 do av 935 lbs, balance as noted. Veal calves—Receipts, 44; weak to 25c lower; quality not very good. Milch cows and springers unchanged.

Parsons & Hobart sold Sullivan 4 mixed stockers av 675 at \$3.50.

Each sold same 2 mixed butchers av 915 at \$3.70, a cow weighing 1010 at \$3, and 1 do weighing 1000 at \$2.25.

Judson sold same 4 stockers av 570 at \$3.30 and a bull weighing 780 at \$3.00.

Beach sold same 10 stockers av 660 at \$3.80 and 2 cows av 1170 at \$3.

Jedele sold same 7 steers av 1077 at \$4.25, 2 bulls av 1285 at \$3, and 3 fat cows av 1116 at \$3.50.

Reason & D sold Regan 18 mixed butchers av 622 at \$3.25, and 9 mixed stockers to Mason & F av 690 at \$3.40.

Forrester & H sold Sullivan 9 steers and heifers av 800 at \$3.90.

Lowrey sold same 2 bulls av 975 at \$3, 21 steers and heifers av 833 at \$3.90, 3 heifers av 706 at \$3.50, 2 cows av 950 at \$3.40, and a bull weighing 710 at \$2.50.

W W Loosemore sold same 2 steers av 920 at \$3.60 and 7 bulls av 771 at \$3.00.

Bullen sold same 4 mixed av 752 at \$3.65 and a cow weighing 1300 at \$3.

Roe & Holmes sold Robinson 2 bulls av 1525 at \$3.50, 3 mixed butchers av 826 at \$3.50, 10 steers av 935 at \$4.20, 7 cows av 1017 at \$3.25, 15 steers and heifers av 857 at \$4.10, 4 mixed butchers av 747 at \$3.25, 8 do av 843 at \$3.25, 6 mixed butchers to Mich Beef Co av 871 at \$3.50, 2 do to June av 585 at \$3.15, 11 feeders to Rockwell av 766 at \$3.85, 3 do av 986 at \$4, 4 mixed to Ford av 833 at \$3.65, 8 mixed butchers to Magee av 662 at \$3.25, 2 cows av 1120 at \$3, and 1 do weighing 1000 at \$3.25, 5 bulls to Mason & F av 766 at \$2.75, 5 stockers av 596 at \$3.50.

5 mixed butchers to Fitzpatrick av 786 at \$3.55, 3 do av 893 at \$3.55, 7 steers and heifers to Robinson av 939 at \$4, 9 mixed butchers to Kammer av 875 at \$2.75, 12 do av 614 at \$3.25, 18 mixed stockers to Mason & F av 698 at \$3.40, 6 do av 570 at \$3.40, 5 bulls av 624 at \$2.90, 3 do av 776 at \$2.90, and 3 stockers av 626 at \$3.50, 9 mixed butchers to Mich Beef Co av 786 at \$3.65, 6 do av 851 at \$3, and 2 cows av 940 at \$2.

Spicer & Merritt sold Cook 12 steers and heifers av 833 at \$3.90, 8 mixed butchers av 657 at \$3.50 and 3 bulls av 716 at \$2.50, 7 feeders to Graham av 990 at \$4.20, 1 do weighing 830 at \$4, 8 mixed butchers to McIntyre av 537 at \$3.50, 3 bulls to Schleicher av 766 at \$3.10, 3 bulls to Hack av 453 at \$3, 29 stockers to Sullivan av 613 at \$3.50, 6 mixed av 703 at \$3.70, 3 cows av 993 at \$3.25 and 10 heifers av 722 at \$3.65, and 4 mixed stockers to McDonald av 560 at \$3.25.

SHEEP AND LAMBS.

Receipts, Friday, 711; one week ago, 703. Quality not very good. Market fairly active and unchanged from yesterday's prices, quality considered.

Roe & Holmes sold Mich Beef Co 59 lambs av 72 at \$5.00 and 47 do av 75 at \$5.00.

D B Sutton sold same 37 mixed av 67 at \$2.75.

Each sold same 25 av 72 at \$2.60.

Dunlavy sold Caplis & Co 45 sheep and lambs av 71 at \$4.40.

Bullen sold Mich Beef Co 21 mixed av 96 at \$2.75, and 13 lambs av 90 at \$4.65.

Parsons & H sold same 21 mixed av 82 at \$3.50, and 40 lambs av 73 at \$5.00.

Knapp sold Fitzpatrick 48 lambs av 70 at \$5.00, and 10 mixed av 102 at \$3.50.

Smith sold Hiser 22 mixed av 76 at \$4.60.

Descher sold Mich Beef Co 39 lambs av 63 at \$4.80.

HOGS.

Receipts, Friday, 3,773, as compared with 4,511 one week ago. Market active and 2½ to 5c higher than prices paid yesterday. Bulk sold at \$3.60 to \$3.65. All sold closing steady.

Roe & Holmes sold Hammond, S & Co 84 av 155 and 119 av 147 at \$3.60, 31 av 195 and 29 av 205 at \$3.57%, also 33 av 107 at \$3.40.

Belhimer sold same 41 av 185 at \$3.57%.

Knapp sold same 96 av 168 at \$3.55.

Sutton sold same 97 av 211 at \$3.60.

Ramsey sold same 62 av 224 at \$3.62%.

Roberts & Spencer sold same 144 av 188 at \$3.62%.

F W Horner sold same 111 av 196 at \$3.65.

Jedele sold same 41 av 216 at \$3.60.

Roe & Holmes sold same 71 av 216 at \$3.67%.

F W Horner sold same 107 av 217 at \$3.65.

Cassey sold same 68 av 232 at \$3.65.

Roe & Holmes sold same 35 av 211 at \$3.60 and 68 av 194 at \$3.62%.

Bullen sold Sullivan 37 av 177 at \$3.60.

Descher sold same 32 av 179 at \$3.50.

Judson sold same 19 pigs av 98 at \$3.00.

Roberts & S sold same 27 av 94 at \$3.25.

Smith sold same 52 av 174 at \$3.55.

Miller sold same 79 av 166 at \$3.60.

Dunlavy sold same 88 av 167 at \$3.50.

Richmond sold same 92 av 174 at \$3.65.

O'Hara sold same 107 av 175 at \$3.62%.

Bullen sold same 85 av 123 at \$3.40.

Cassey sold same 107 av 151 at \$3.60.

O'Connor sold same 67 av 177 at \$3.60.

Lingerman sold same 103 av 183 at \$3.55.

Horne & B sold same 78 av 189 at \$3.60.

Fenton sold same 33 av 142 at \$3.45.

Stecker sold Parker, Webb & Co 66 av 188 at \$3.65.

Parsons & H sold same 150 av 206 at \$3.65.

Hauser sold same 11 av 194 and 107 av 197 at \$3.62%, 77 av 189 and 77 av 198 at \$3.55.

Each sold same 102 av 193 at \$3.60.

Eddy sold same 67 av 181 at \$3.55.

Cooper sold same 55 av 191 at \$3.60.

Lowry sold same 146 av 172 and 125 av 174 at \$3.55.

Judson sold same 81 av 170 at \$3.62%.

Loosemore sold same 62 av 208 at \$3.62%.

Horne sold same 78 av 179 at \$3.55.

Fox & Bishop sold same 54 av 193 and 102 av 196 at \$3.55.

OUR BUFFALO LETTER.

East Buffalo, October 20, 1898.

Cattle.—Receipts of cattle on Monday last were 7,898, as compared with 5,544 for the same day last week. Shipments were 5,208, as compared with 4,698 the previous week. The receipts were the heaviest of the season, and the market ruled slow and lower. A few extra finished smooth, handy weight steers sold about level with last week's range, but everything else was lower. Ordinary butchers' cattle were 15¢ to 25¢ lower, and feeding stock 10¢ to 15¢. Top

steers sold at \$5.20 to \$5.45; good to choice, \$4.85 to \$5.10; ordinary to fair, \$4.25 to \$4.65; cows, \$2.25 to \$3.50; heifers, \$2.50 to \$4.60; bulls, \$2.75 to \$3.85. Tuesday few cattle were on sale, and values were largely nominal. Wednesday the market was dull for all kinds, and feeders, which were in large supply, declined 10¢ for all but fancy lots, and bulls were also lower. Quotations at the close were as follows: Export and Shipping Steers.—Prime to extra choice finished steers 1400 to 1500 lbs, \$5.50 to \$5.45; prime to choice steers 1300 to 1400 lbs, \$5.20 to \$5.30; good to choice fat steers 1250 to 1300 lbs, \$5.10 to \$5.20; good to choice fat smooth steers 1050 to 1200 lbs, \$4.85 to \$5.10; green coarse and rough fat steers 1050 to 1400 lbs, \$4.25 to \$4.65. Butchers' Native Cattle.—Fat smooth dry fed steers 1050 to 1150 lbs, \$4.30 to \$5.10; fat, smooth, dry fed light steers 900 to 1000 lbs, \$4.65 to \$4.75; light to fair dry fed steers, \$4.25 to \$4.50; green steers thin to half fattened 1000 to 1300 lbs, \$4.15 to \$4.35; fair to good steers 900 to 1000, \$3.90 to \$4.35; choice smooth fat heifers, \$4.40 to \$4.60; fair to good fat heifers, \$4.00 to \$4.15; light thin, half fat heifers, \$3.50 to \$3.75; fair to good mixed butchers' stock, \$3.50 to \$3.90; mixed lots fair to choice quality fat cows and heifers, \$3.50 to \$3.75; choice to extra smooth, well fattened butcher cows, \$3.65 to \$4.00; fair to good butcher cows, \$3.00 to \$3.50; common old shelly cows, \$2.00 to \$2.50. Bulls and Oxen.—Export weight bulls, fat and smooth, \$3.75 to \$3.80; good fat smooth handy weight butcher bulls, \$2.25 to \$3.60; fair to good sage bulls, \$2.75 to \$3.15; stock bulls common to extra, \$2.50 to \$3.25; fat, smooth young oxen to good lots fit for export, \$4.25 to \$4.50; fair to fairly good partly fattened young oxen, \$3.75 to \$4.00; old common and poor oxen, \$2.50 to \$3.50. Native Stockers and Feeders.—Feeding steers, good style weight and extra quality, \$4.00 to \$4.25; feeding steers common to only fair quality, \$3.50 to \$3.80; good quality yearling stock steers and calves, \$2.75 to \$3.50; stock heifers common to choice, \$3.00 to \$3.30; stock steers cull grades and throw outs, \$3.00 to \$3.35.

Thursday the market was steady with very few on sale.

Sheep.—Receipts of sheep and lambs on Monday last were 16,600, as compared with 12,000 the previous week. Shipments were 10,200, as compared with 7,800 the previous week. While receipts were quite liberal, there was a fair demand, but at a decline of 10¢ to 15¢ on lambs. Sheep held steady, as did yearlings. Spring lambs ranged at \$4.50 to \$5.75 for culls to best; sheep, \$2.25 to \$4.85; yearlings, \$4.25 to \$5.00. Tuesday lambs held about steady, while sheep and yearlings were firm at Monday's prices. Wednesday the supply of native stock was moderate, but there was a large supply of Canadian. The market opened fairly active and strong for lambs, with sheep and yearlings scarce and firm. Quotations at the close were as follows: Lambs, choice to extra ewes and wethers, \$5.60 to \$5.75; buckey and fair, \$5.25 to \$5.50; cull, fair to good, \$4.50 to \$5.25; common to choice yearlings, \$4.40 to \$4.65; native clipped sheep, choice to selected wethers, \$4.75 to \$4.90; fair to choice mixed sheep, \$4.50 to \$4.75; culls and common ewe sheep, \$2.25 to \$4.25; Canada lambs, good to choice ewes and wethers, \$5.75 to \$5.90; good to choice, part bucks, \$5.60 to \$5.75; buckey lots, \$5.40 to \$5.50.

Thursday the market ruled quiet and steady at Wednesday's prices.

Hogs.—Receipts of hogs on Monday were 29,260, as compared with 26,790 for the same day last week. Shipments were 21,850, as compared with 19,760 for the same day last week. The market opened with a good demand, and prices steady to strong with those ruling at the close of the week. Corn-fed lots were strong all day and closed firm, while common half-fed and grassy lots were easier at the close. The extreme range of the day was \$3.75 to \$4.05, as compared with \$3.75 to \$4.10 on Monday of last week. Tuesday receipts were light, but the demand was equally so, and values were barely steady with Monday's range. Wednesday receipts were fair, and the market was fairly active all day. Prices ruled about steady for weights of 150 lbs and upward, but pigs to higher weights were easier as follows: Good to choice Yorkers 175 to 185 lbs, \$3.80 to \$3.90; prime light Yorkers, \$3.80 to \$3.85; grassy and Michigan lots, \$3.75 to \$3.80; mixed packers' grades, \$3.55 to \$3.95; medium weights, 200 to 240 lbs, \$3.90 to \$3.95; heavy hogs, 250 to 300 lbs, \$4.40 to \$4.10; grassy heavy ends, \$3.75 to \$3.85; roughs, common to good, \$3.25 to \$3.45; stags, common to choice, \$2.50 to \$3; pigs, good to choice, \$3.75 to \$3.85; skips, common to fair, \$2.50 to \$3.50.

Miscellaneous.

WHEN NUTS ARE RIPE.

A crisp wind fitting the gold leaves down
From the whispering beeches' glim-
mering heights;
The gilt sun tanning the walnuts brown
And tinting the woods with scarlet
lights;
The metallic rasp of the squirrel's call;
The bluejay's scream in the maples,
then
A swish and thud as the ripe nuts fall—
And we laugh with the glee of "nut-
ting again."

Then it's over the hills when the day is
new,
And the hoarfrost gleams on the way-
side grass,
And the webs in the hazel drip with dew
And bar the patch where the cattle
pass.
The ways are wet to the eager feet
That romp in a race to the nutting
ground,
But the bypaths dry ere the nutters
meet
Where the treasures of tree and bush
are found.

Then it's over the hills when the day-
light wanes,
And the heart is light from the happy
quest
Of the burden that cheers while its glad
weight pains
Till the muscles thrill for the joy of
rest.
So we watch the gold and the red grow
bright,
And echo the squirrel's gay call, when
The hoarfrost gleams in the autumn
light,
And we dream of the pleasure of "nut-
ting again."

—Chicago Record.

THE LOVER'S QUEST.

BY ERNEST GLANVILLE.

Author of "The Lost Heiress," "The Fossicker,"
"A Fair Colonel," "The Golden Rock," &c.

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(CONTINUED)

"You speak foolish words," said Stoffel, though his eyes shifted. "If I wished to shoot I would do it now. Do not trifle further."

"I have nothing to tell you."

"Soh!" Stoffel stroked his beard, and looked steadily at his prisoner. "Think again. If you die, you are done. There is no longer the joy of life, the sight of the sky and the land; the sun shines no more for you, the night never again invites you to sleep, the morning to wake to fresh deeds. There is no more the friendship of men or the love of women. Eh? What do you say?"

Miles looked at the wide river, at the belt of forest beyond, at the flight of birds, and at the long array of silent men. Life was precious, but would they give him his life? He doubted it.

"I came here," he said, "myself. No one brought me."

"That is a lie," said Stoffel, with sudden fierceness. "We found the spoor of two men. Why did you come?"

"I came after you," said Miles, boldly.

"And you found me, eh? The man who was with you—is he not some dog of a Hottentot?"

"That you must find out for yourself."

"Bismillah!" said the Arab, breaking in. "This Englishman is worthy of his salt. I like a man who is true even to his servant. Remember the offer I made you in the north. It stands good yet. Be one with us, take your place in the ranks as a captain, and we will forget all."

Miles glanced from them to the immovable wall, and shook his head. The temptation to live was great, too great for him to spurn the offer with indignation.

"It is the will of God," muttered the Arab. "But the man would have looked well in the saddle."

"Is that the last word?" said Stoffel. Miles nodded. He felt his throat swell, and he knew his words would have come hoarsely.

"It would have been well for you, Englishman, if you had never seen me."

CHAPTER XVI.

Stoffel faced the regiments.

"Men of the Amatabele," he said, lifting his deep voice till it rolled to the furthest man, "this is one of those who have despoiled your land. He has been a spy upon us, and the word has been spoken that he must die."

"He must die!" thundered the warriors, lifting their right hands.

"When the white robbers take a spy they give him a dog's death. We will serve him as they would serve you. He will die the death of a dog."

"Let him die like a dog!" thundered the regiments.

"He will be bound to the stake in

the vlei. There are crocodiles there. He will die the death many times over before they eat him."

The men were silent. This form of death was new even to them, and they turned it over in their minds, fascinated by the horrible idea. Then a murmur rolled down the ranks, and some of them laughed.

"It pleases you?"

They shouted now fiercely.

"This is the first of them. You will wash your spears in the others. You will eat them up as the crocodile will eat this man."

"We are hungry," shouted the warriors. "Give us meat."

Stoffel made a sign, and Miles was taken off. He had not understood what was said, but the fierce responses of the men had warned him plainly enough that the end was at hand. Soon he was at the edge of the lagoon, which stretched out over several acres, with tufts of grass and rushes springing up, and here and there small uncovered stretches of mud. A flock of duck were floating on the water, and on the banks were tall reeds.

They stripped him of his clothing, and they bound him to the pole, with his face to the stagnant pool.

What next! They could not surely mean to leave him there to die by inches, with the weight of his body dragging on the tight thongs, to be roasted in the day time, to shiver through the night, to feel the dreadful torment of thirst, with water within reach. For the first time he felt fear; not the fear of death, but the dread of that lingering torment that would be worse than death; and he struggled dumbly, with staring eyes, while the sweat gathered on his forehead.

"It is late," said Stoffel, hoarsely, "and I will let you go free now only to be my servant."

Miles writhed until he could turn his head.

"Shoot me!" he cried.

"My man, you have made your bed; you must put up with it," and he turned away, Miles following him with wild eyes.

He called to the Boer who had bound him.

"Shoot me, for the love of God!"

The man shook his head and went off heavily, muttering under his breath, for he did not like this thing, and felt an unaccustomed glow of pity that made him uncomfortable.

Miles, with his head turned, watched them go, hoping yet to see one kneel and aim, but instead they began to cross the river, some in canoes, the bulk of them swimming from island to island. The last man to cross was Stoffel. He turned, dropped to his knee, and lifted his rifle. Miles held his breath and waited for the smoke. The big man was taking a long aim; he meant to be sure of his mark. At last a slight puff of smoke curled up from the rifle, and the ball struck the pole, sending a fragment whizzing into the water.

Then Stoffel rose, waved his hand, and stepped into the canoe.

That bullet was never meant to kill. This was Stoffel's last crowning vengeance. Miles laughed aloud. The sound of it reached the men in the boat and they did not like the noise. They rowed quickly, and presently disappeared behind a sheltering island. He was alone now, in an awful silence, with the sun already hot on his head. A flock of birds alighted near to drink, giving him the regard of their full bright eyes for a moment, to convince themselves of his helplessness. A crow wheeled over his head croaking, then flew heavily away to a tree. He heard the heavy flapping of the wings and the hoarse cry dimly through a sound as of rushing waters, for his blood was at fever heat from the glare of the sun. He tossed his head from side to side, and found the slight shade thrown by the pole, and closed his eyes to the desolate view. His chin drooped, his body hung without life from the fastenings, and he must have been for some time unconscious. Then the aching of his arms aroused him, and as his hollow eyes opened he saw that it was dusk. There were dark shadows on the water intermingled with many colored lights reflected from the flaming sky, the whole calm sheet outspread in a picture of perfect quiet and beauty.

His eyelids were like lead, the effort to keep them open shot acute pains through his head, and he dropped them with a feeble groan, which was wrong from him again and again by the torment of thirst, and the dull, gnawing pain from his arms and body. If there was one mercy it was this, that he

could not think. There was no torture of the mind. The physical pain was too great, it numbed the brain and left him incapable of estimating the horrors that might be in wait for him in the night. A slight shower somewhat dispelled the torpor of the mind. As he felt the drops on his burning skin he turned his face up, and gradually his faculties resumed sway. He heard and understood the cries of night-birds, and became conscious of a growing coolness in the air, which did more to restore him. Then he heard a movement in the water, and dimly made out some dark form approaching. What it was he could not tell, nor did he care, but fixed his dull glance, as if for the comfort of companionship in some living creature. When it had approached, splashing, nearly to the foot of the pole, it remained still, a dark, motionless shadow on the water, and by and by he forgot about it, and closed his eyes again to wait in suffering for the end. The noises increased until the air was filled with one hideous din that rung through his brain; the croaking of innumerable frogs, the calls of plover and duck, the cries of jackals, accompanied by the splashing of water, strange whimpers, and loud snatches of laughter. He had a confused idea that Stoffel and his warriors had come back to laugh at him, and several times he called out to them in a voice scarcely audible to himself to shoot him.

All through the night this went on, and when the dawn slowly broke his eyes were wide opened and he was gazing out before him to the sky.

There had latterly come strange sounds from the dark form in the water before him, and at the first lifting of the shadows he had distinguished the snout and eyes of a crocodile just showing above the surface. The little green eyes were fixed upon him. They had no doubt been watching him all night, and as the shadows rolled back he had seen other horned-rimmed eyes fixed on him where the waiting reptiles floated. So he knew the end was at hand, and was thankful; thankful that there was no fever in his blood, no madness in his brain, neither fear of death. He was weary, intensely weary, and he watched the brightening sky with the hope that there he would find rest.

And so Hans found his master.

The cool morning breeze was rippling the still surface of the lagoon, making eddies about those grim, protruding knobs, there was an awakening of life that in the cold dark hours before the dawn had been stilled, and Miles heard as if afar off the patter of feet, and that same horrid laughter that had haunted him in the night. He was conscious of a movement in the water. He moved his lips, and glanced a moment below where the long, hideous head was uplifted, showing the row of yellow, hideous overlapping teeth. Then the air rang to the sharp smack of a rifle shot, followed by the sound of an animal gasping in its death throes. These sounds seemed to be detached, the echoes from another world, and he still looked dimly before him. So, too, he dimly heard some one at his side crying, laughing, and swearing, and his hands working at his limbs. Next he was lying on the ground groaning from the pain in his limbs as they were straightened out and rubbed. He wished he had been left on the post. This bringing back to life was surely worse than death, for the cramp pains, and the burning of his skin, and the heaviness that weighed upon his spirit.

"Alamagtig, baas, you was dead. You made me skeered when I look into your eyes."

Miles muttered in reply.

"I wish you would take me away from the fire."

"Ja, baas," said Hans, "drink this."

Miles opened his mouth like a sick child, without raising his eyelids, and swallowed some brandy. A few moments later he was given warm bird soup, and then he suddenly sat up and looked around him with another protest at the fire. He found himself sitting in the shade of a bush, and then looked down at his arms. He was one mass of red spots.

"It is all right, my baas," said Hans. "The mosquitoes have eaten you. It is good so, and the blood they took has brought the bass through the night. Ja, sieur, jes mosquito bites—flies; and the baas must shake himself and get well. It is not a fly that will frighten him. See there, my master, look! If so he did bite, it was over."

Miles, with heavy, blood-shot eyes, followed the direction indicated by the

Hottentot's finger, and at the water's edge, across the flat, he saw a huge reptile slowly advancing with mouth agape upon some dark form. As he looked the jaws snapped and the brute returned with its prey to the water, while from the vlei there came the loud snapping of jaws.

"It is the wolf, sieur, he has taken. He was hungry to run in at the baas, but the crocodile keeping watch there scared him. All night he must have been there, for he made a path with his feet, and he was there when I came. I heard him laugh, and shot."

Miles turned and looked at his man. "Ja, my baas," said the old man huskily, "I was near late. Now you must sleep, and I will get medicine to rub the body and legs."

Later on Hans formed camp on some high ground on a rock-strewn kopje, and succeeded in getting his master there by slow stages. Here they remained for several days, until Miles was gradually brought back to life.

"Hans," said Miles, when he had regained his strength, "where have Stoffel and his men gone?"

"Into the Matabele country, certain."

"Are there many whites there?"

"Ja, sieur, but they are scattered. Al-leverel, baas, the white man is hard to understand. He will fight with the Kafir, good. Bymby the Kafir say peace. The white man say all right, and then he jes step off into the land and put up his house among the Kaf-firs, one house here, one over yonder, wide apart. So the Kafir one day take his assegai and kill them one by one. When the Kafirs go into a new land they stop all together."

"I am afraid Stoffel's men are going against the whites."

"Ja, dat es waar."

"I have been thinking, Hans, we must follow and do our best for the whites."

"Soh! and what of the white girl?"

"I have been on the wrong spoor. Hans, I had a thought that someone I cared for was in Stoffel's house, but I found I was mistaken. It was another person I saw in Stoffel's house, and he made her a present to the chief."

"Stoffel is a slim kerel, baas. If the baas has good ground to think that someone is in the country, it is nothing that he did not see her, for Stoffel would put her where the Arab chief would not look. That is my thought. We will be on the right track if we follow Stoffel. I did hear the Boers laugh among themselves that Stoffel was humbug the Arab."

"What did they say?"

"They talked of a white bird and a black bird, and made sport of the Arab, saying that black was good enough for him. I tell you, Stoffel will turn on the chief when he gets him in the land."

The words of the cunning old Hottentot took possession of Miles, and renewed both his hopes and fears. Hitherto he had been pursued, and he was determined now to be the pursuer, to track Stoffel as he would a wild beast.

They crossed the river that afternoon, and entered upon a task that was to witness some grim adventures.

(To be continued.)

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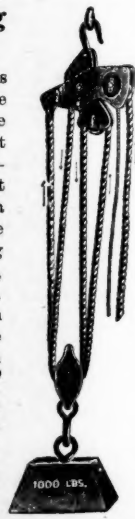
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BEFORE THE DAY.

We wakened at the dawning, but we never saw the day;
And we spoke our little prologue, but we never reached the play.
Oh! our love was sweet and certain till gray Sorrow dropt the curtain.
Ay, we wakened at the dawning, but we never saw the day.

There were buds within our garden, but they never came to flower;
There were birds among our bushes, but they only sang an hour.
And we laughed to see the swallow, but the summer did not follow;
There were buds within our garden, but they never came to flower.

'Tis a garment white and silken, 'tis a white and misty veil,
'Tis a pair of little slippers—O dear love!—so white and frail.
Is the manhood in me dying that I'm sitting here and crying
O'er a garment and a slipper and a never-opened veil?

Dear, the world is empty—empty as the gemless golden band,
The token I had fingered and that never found your hand.
They've been telling me the story of an everlasting glory;
But you were the only preacher I could ever understand.

Ah, we wakened at the dawning, but we never saw the day;
And we spoke our little prologue, but we never reached the play.
But our love was sweet and certain till gray Sorrow dropt the curtain.
Hark! a single bell is calling
and this should have been the day.
—Chambers' Journal.

WILL ENLIST NEXT TIME.

"If there is ever another war I am going to enlist, regardless of the cause."

This was the continuation of a dinner talk at a club in this city. The speaker proceeded:

"The other day I saw Mrs. Blank trying to hail the driver of an ice wagon by yelling at him. I was dumbfounded, because she is generally a helpless creature, and I never heard of her interesting herself in any of the domestic duties of her house. I mentioned the unusual occurrence to my wife at dinner, and she said she thought it was very commendable in Mrs. Blank. I ventured to reply that it was not graceful and that I should not care to see my wife yelling at an iceman, or any other man.

"But, you see," rejoined my wife as she passed my cup, "Mrs. Blank's husband was a volunteer."

"True," said I, "but his command never got to the front. No fault of his, I admit. And now he is home and is as healthy and robust as I am. He told me himself his army experience was an outing for him, and that he never felt better in his life."

"Quite right," said my wife, "but Mrs. Blank probably thinks of what might have been. I saw her calling to the iceman—she was not yelling, as you put it; and she explained to me, dear, that her husband expressed a desire for a dish, the preparation of which required an extra allowance of ice, and that as he had said he had not tasted the dish in question since he enlisted, she thought she would have it prepared, and in order that there might be no mistake she just put on her hat and attended to the order herself. And I think it was very sweet of her."

"I immediately changed the topic. After a cigar I said I would call up my liveryman and have him send around the victoria and team. I thought an evening on Riverside in the face of the moon about the proper thing. As I was starting to the telephone my wife put her arms around my neck and said she had sent the team to Mrs. Blank's because Mrs. Blank had said that Mr. Blank had not been out for a drive since he enlisted.

"Last Saturday I concluded I would give my wife a bit of a surprise, and at 10 o'clock in the morning I called her over the wire and told her to have the man bring her to pier so-and-so, and to bring her traps for a bit of a cruise. She thanked me, and said I was thoughtful, and put in some very pretty talk. She said in the same treacle tone:

"Say, Jim, dear, do you care if Mr. and Mrs. Blank join us?"

"Why?" I shouted back. "They had the rig the other day when I wanted it. Confound it, can't we have our yacht one night alone?" I asked.

"Well, I waited a minute for the effect, and then I heard her voice, low and sweet. 'Jim, dear, I know it was not just right, but I had asked them to go aboard this evening after you came up. I was going to surprise you. And Mrs. Blank said Mr. Blank had

not been on a yacht since he enlisted. I thought it would be nice."

"And so it goes. Mr. and Mrs. Blank were at a card party at my house, and my wife said she hoped that I would not skin Mr. Blank as I used to do, because he had not been to a card party since he enlisted. Mr. Blank sent over for my fishing outfit—you know that outfit which cost me \$300 three years ago, never had it out but twice! Well, I was out of town, and my wife sent it over; and when I howled about it she said poor Mr. Blank had not been fishing since he enlisted.

"And now Mr. and Mrs. Blank and my wife are away up in the Andersons, 'cause Mr. Blank has not been anywhere since he enlisted. And when he looks at me and sees me getting red in the face he shuts one eye and says, 'Jim, you missed it when you didn't enlist?' Why, damn his head, he hasn't been out of the state!"

WISE AND OTHERWISE.

"Yes," observed the clergyman, "we have just terminated the greatest revival our church has experienced for many years."

"I rejoice to hear it," said his friend; "how many did you add to the fold?"

"Oh, we didn't add any," replied the good man, "but we got rid of three."

It is told of Gen. Butler that toward the close of his career, when he ranked at the top of the criminal lawyers in Massachusetts, he was sent for by a prisoner charged with murder. Upon his arrival at the cell the prisoner cried out with much evident distress of mind and with all the accents of imperiled innocence: "Gen. Butler, I want you to defend me. I'm in danger of being hanged and I know you can get me off if anybody can."

"Are you guilty, or are you innocent?" calmly inquired the general.

"Oh, I am innocent, entirely innocent," protested the prisoner with tears.

"Then you don't need me," responded Gen. Butler, rising and reaching for his hat. "Innocent men are not hanged in Massachusetts. Good-day, sir."

"He's one er dese hah campaign mules, suh," explained the old colored farmer, "en it's got so I des can't do nuttin' id 'im. You sees him a-chawin' on dat fence rail, don't you?"

"Yes."

"Well, suh, dat's ple for 'im! He mos' eat up every rail on de place, en w'en it come his meal time he don't stop short er nuttin' 'cept wire fence!"

"Strange appetite, that."

"Yes, suh, you may well say dat! I has knowed him ter walk right in de house en eat up one er dese bedsteads on de instalment plan, en he'd eat up de house itself ef he wuzn't 'fraid de old logs would give him dyspepsia. You see, w'en he been roun' w'd de stump speakers, in de campaign, dey lef' 'im out in de sun all day, en never study 'bout feedin' er 'im; en so, whilst dey wuz a-speakin' from de stump dat mule wuz a-chawin' on it. Politics has been de ruination er dat mule!"—Atlanta Constitution.

He was a fragile youth, and didn't dance all the dances.

"Let's sit it out," he said to his pretty partner.

"Where?" she asked.

"On the stairs."

So they went up a little way and sat down.

"Wh-why, what's the matter, Mr. Stackpole?" cried the fair young girl. For the young man had hastily risen and was gasping for breath. He could not reply. His face was livid, his eyes were rolled up, and with one shaking hand he clawed feebly at the skirts of his Tuxedo.

"What kind of an attack is it?" she gasped.

At this question his voice came back to him.

"What difference does that make?" he harshly growled. Then, without a word of apology, he dashed up the stairs and flung himself into the men's coatroom.

And how was she to know that it was an ordinary carpet tack that the man who canvased the stairs had carelessly left standing on its heel?—Cleveland Plaindealer.

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"I have a baby two months old. When he was born I was sick only fifteen minutes, whereas with my other children I was sick for two or three days, and also suffered with my left leg, and could get nothing to relieve the pain but morphine. My leg did not trouble me at all this time. I had no after pains and was not as weak as I had been before.

"I cannot praise Lydia E. Pinkham's Vegetable Compound too highly. May God bless you in your noble work."

Mrs. J. W. PRUETT, Medford, Oregon, says:

"My health, also the baby's, we owe to Lydia E. Pinkham's Vegetable Compound."

Mrs. JOHN W. LONG, Wyoming, Iowa, writes:

"I had shooting pains all over my body, was very weak and nervous. I could not straighten up. I wished to become a mother but was afraid I never could. Seventeen months ago I got some of your Vegetable Compound, and after taking half a bottle was much relieved. I took four bottles and was cured. Now I have a big baby boy which I feel I owe to your Compound. Many thanks for your kind advice."

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Farmers' Clubs.

CONDUCTED BY A. C. BIRD.

All correspondence for this department should be addressed to A. C. Bird, Highland, Mich.

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—E. J. Cook, Owosso.
Vice-President—Mrs. E. L. Lockwood, Petersburg.
Secretary—C. M. Pierce, Elva.
Directors—W. H. Howlett, Danville; C. J. Phelps, Damon; F. M. Whelan, Vernon; A. L. Landon, Springport; H. Gaunt, Highland; A. P. Green, Eaton Rapids.

All communications relating to the organization of new clubs should be addressed to C. M. Pierce, Elva, Mich.

ASSOCIATION WORK FOR NOVEMBER: Election of delegates to the annual meeting of the State Association and a general discussion of Associational work.

THE STATE ASSOCIATION OF FARMERS' CLUBS.

WHAT THE ASSOCIATION HAS DONE FOR THE LOCAL CLUBS.

It has increased the number of local clubs in the State from sixty to three hundred in four years.

It has increased the farmers' club membership in Michigan from less than four thousand to more than thirty thousand.

It has unified and centralized the working forces of this great army, making possible lines of work heretofore utterly impracticable.

It has been the means of bringing together annually, for a mutual interchange of ideas, representative farmers' club workers from every portion of the State.

It has given the farmers' club movement a State and even a National reputation for practical work in public affairs.

It has by honest merit so popularized the movement that to-day in thirty States local clubs are holding regular sessions every month, following in almost every detail the methods here originated.

It has made weak clubs strong and strong clubs stronger, by providing a means of communication among all the clubs of the State.

It has secured for the use of the local clubs their most powerful ally, the Farmers' Club Department of The Michigan Farmer, affording a satisfactory means of weekly communication among the local clubs and giving a standing, publicity and effectiveness to the work otherwise unattainable.

WHAT THE ASSOCIATION HAS DONE FOR THE PEOPLE AT LARGE.

It has secured unity of effort among the practical people of the State in support of judicious reform in public affairs.

It has brought harmony out of discord by uniting all the forces desiring to battle for good government; forces which have been powerless from lack of organization.

It has brought a new and vastly improved social and intellectual life to the three hundred communities into which it has carried the farmers' club movement during the past four years.

It has brought together at regular monthly meetings from twenty thousand to thirty thousand people whose interests are identical with our own, for the purpose of discussing questions of common interest to us all.

It has through this mutual interchange of ideas, and by this mutual mingling socially and intellectually, made of these thirty thousand people and all others with whom they have become associated, better citizens, better fathers, better mothers, better husbands, better wives, better home-makers and more successful farmers.

It has made every family that has joined these clubs, or that has come under their influence, a happier and a better family, cultivating in them that breadth of mind and that independence of thought which mutual intercourse with one's fellowmen alone can give.

It has, by leading in a systematic study of public affairs, multiplied many fold the number of farmers in Michigan who are giving careful and judicious consideration to public matters, and who have in consequence become capable and willing to do their duty as responsible citizens.

WHAT THE ASSOCIATION HAS DONE TO REDUCE TAXATION.

It has brought about a marked improvement in the business management of every public institution in Michigan.

It was the means during the last session of the State legislature of judiciously reducing appropriations for

State institutions more than \$150,000.

It has been the means of lowering the salaries of county officers more than \$60,000 annually.

It was the means of preventing the establishment of at least two new State institutions by the last legislature.

It was the means of saving the taxpayers of Michigan over \$100,000 annually by defeating the anti-contract prison labor bill.

It was the means of keeping on the tax rolls a large amount of personal property, in the form of mortgages, by preventing the repeal of the mortgage tax law.

It was the means of saving the taxpayers of the State many thousands of dollars annually by lending its powerful influence in the hard-fought and close contest against Callahan & Company, who had heretofore been granted a monopoly of the publication of the State laws.

It is, and since its organization has been, the earnest, loyal and powerful champion of equal taxation, and will be a most potent factor in the great fight that is yet to come along these lines.

All this has been brought about without the aid of paid organizers or any paid officials, but by a simple, well-organized appeal to the patriotism of the farmers of this State.

No longer is it asked, "Is the State Association of Farmers' Clubs worthy of support?"

NOTES ON REPORTS FROM LOCAL CLUBS.

The Kimmis Bill, from a business standpoint, is tersely treated in the Maple River report.

The Columbia Club is the first to report the election of delegates to the annual meeting of the State Association to be held at Lansing December 13-15.

Every club member in Michigan should read the articles in this issue by President Cook and Secretary Pierce, of the State Association, on The Coming Annual Meeting.

The Webster of Oakland Club takes the initiative in the formation of a County Association for Oakland county by calling a meeting of delegates from the clubs of the county at Pontiac, November 15.

The action of the Putnam and Hamburg Club regarding the Atkinson and Kimmis Bills is fairly typical of almost every, and we think every club in the State. The determination to centralize every effort in behalf of these two measures is practically unanimous.

Among the best of our club correspondents for 1897 was Mrs. T. J. Conely, of Howell, whose death is chronicled in the current report of the Genoa Club. Such loyal workers can ill be spared from farmers' club ranks. She was a help to the Association as well as to her local club.

THE COMING ANNUAL MEETING.

E. J. COOK, PRESIDENT OF THE STATE ASSOCIATION.

I take this opportunity to impress upon the minds of the Farmers' Club members of Michigan the fact of the annual meeting of the State Association of Farmers' Clubs, which will be held, as already announced, at Lansing, December 13-15. Any club in the State which has not as yet become a member should have delegates at Lansing and join the State Association. If we are to exert a force in our legislative halls this coming winter it will be largely the result of this meeting. While any club, alone and unassisted, may accomplish much locally, and may even have a limited influence in matters of state, it is only when we are united in purpose and throw our combined influence on an objective point that real success will be achieved.

It is very important that the actions taken at this meeting shall truthfully represent the wishes of the club members of the State. This will be the case if the delegates sent to this meeting be representative members, who have the disposition and ability to take part in the deliberations and voice the sentiment of their club.

The questions which should and will receive the special attention of our annual meeting will be the County Salaries Bill and the Equal Taxation Bill. The attitude of every nominee for State Senator or Representative toward these measures should be determined at once, and should any be found who

would not heartily support these measures the fact should be as widely circulated as possible.

In conclusion allow me to particularly emphasize:

First. The importance of the annual meeting and of every club in the State being a member of the State Association.

Second. The importance of electing delegates who will be truly representative men.

Third. The desirability of knowing the attitude of our would-be lawmakers toward these measures in which we are so much interested.

With these matters attended to a successful and fruitful annual meeting is assured.

WHY WE SHOULD ATTEND THE ASSOCIATION MEETINGS.

SECRETARY C. M. PIERCE, OF THE STATE ASSOCIATION.

The thought has come to me that perhaps it might be of benefit to the work and of interest to some of the club workers if I should write out a few of the reasons why we should all make an effort to attend the annual meeting of the State Association.

First. We should all make this effort because every active member of any club who attends helps to make the meeting more interesting and to create enthusiasm among the delegates, which in turn is carried back to the home clubs, and helps to keep up interest in the grand work. New members are thus brought to the clubs, and their strength is increased and their ability for future usefulness is multiplied.

Second. The meeting of so many delegates from different parts of the State cannot help but be of personal benefit to everyone who attends these meetings, whether they are delegates or not. The best talent of the State is here found, and we always come in contact, in a personal way, with those who give us ideas and set us to thinking and acting along lines which will afterwards prove of great usefulness to us in our home life, making life happier and easier to live.

Third. We should make an effort to attend, because in no other way do we have an opportunity of finding out what the clubs of the State are actually doing, or of forming a true estimate of the farmers' ability as compared with that of men of other callings. As "In union there is strength," so "In a multitude of counselors there is wisdom."

Fourth. At this season of the year, after the hard work is over, everyone should take a short vacation, getting away from home and care for a few days, thus making it all the sweeter and more desirable when we return. In no way, in my opinion, can we spend three days any more pleasantly than in attending these meetings. When the representatives of nearly 50,000 farmers meet at the same time in Senate chamber and Representative hall and discuss the mistakes and successes of the past and make plans for the future, it certainly inspires a person, and makes one feel that the time has come when farmers as a class are on an equality, if not a notch above those of other vocations.

This year the annual meeting will be one long to be remembered by those who are so fortunate as to attend. The program, as planned by the officers of the Association, will be full of interest from the beginning to the end. The best ability in the State has been engaged, not only among the farmers but other vocations and professions. The joint meeting of the State Grange and State Association of Farmers' Clubs to be held on Wednesday evening, December 14, will alone be well worth the time and expense of the whole trip.

Another reason why we should attend these meetings is that the State institutions located in Lansing can be visited at this time and more be learned about what they are doing than at any other time. It is a fact that every taxpayer in the State should pay a visit to these great institutions, and at no time can it be done to better advantage than during the meeting of the Association. We are in hopes to be able to announce the program in full before the end of the month.

In conclusion, we would urge every club in the State to make plans to be represented at this meeting. Each club is entitled to two delegates. We have made arrangements for good board at the principal hotels at one dollar per day and upwards. There will also be reduced railroad rates, making the cost

of the three days very low and certainly within the reach of every club in the State. Friends, let us make this sixth annual meeting of the Michigan State Association of Farmers' Clubs one long to be remembered in its history, the memory of which can be carried down to future generations as one of the many landmarks of the great and useful work done by the farmers of Michigan.

REPORTS FROM LOCAL CLUBS.

OLIVE FRANCH FARMERS' CLUB.

The last regular meeting was held at the home of F. M. Jones in Brandon. The severe storm of the forenoon interfered with the attendance and only about twenty-five members were present. Topic discussed: "Shall we retain all the territory gained in the late war?" October meeting with Mr. and Mrs. E. Foster, in Springfield, when the Association question on taxation will be taken up.

Oakland Co.

REPORTER.

ARGONAUT FARMERS' CLUB.

The Argonaut met with Mr. and Mrs. F. E. Durfee, October 6. There were talks on the manufacture and use of phosphates and on naval and military academies. The discussion of the club question was laid aside and Mr. Kimmis gave the club more than an outline of the Atkinson Bill that came up before the special session of the legislature. He thought it the only practical solution of the railroad taxation problem, yet the Michigan Central, for reasons well known, could not be included in the bill. In the short discussion that followed his talk it was deemed that to raise the specific rate upon the gross earnings of the railways would bring about the desired result.

Oakland Co.

COR. SECT.

OXFORD FARMERS' CLUB.

The Oxford Farmers' club does not stop for stormy weather. An interesting meeting was held at the home of J. G. Noble, September 24. Question for discussion, "Is Farming a Business, Trade or Profession?" It was thoroughly discussed and the general view of the matter was that it is a combination of all, as it surely requires business ability in farming to succeed. It is a trade that needs to be thoroughly learned, the adjustment of machinery, etc., requiring mechanical skill and training. It is also a profession, especially in the case of the special farmer. The man who can make a success of breeding stock of any given variety is entitled to be called professor so much as the fellow who goes about the country giving exhibitions of sparring or slugging. It was claimed that special farming is more profitable and has a tendency to better citizenship than mixed farming because there is a concentration of effort in the case of the specialist and a consequent development, while with the mixed husbandman things are apt to be so very badly mixed that no great excellence or success can result. The club children gave dialogues and recitations. Next meeting with Mr. Frink, October 29.

Oakland Co.

REPORTER.

MILFORD FARMERS' CLUB.

A very pleasant meeting of the club was held at the home of Mr. and Mrs. Andrew Coulter, October 5. The Association question, "The Most Practical Solution of the Railroad Taxation Problem," came up for discussion and a motion favoring the taxation measure known as the Atkinson bill was carried. The discussion of the question, Resolved, That it is impolitic to extend our territory, was opened by Mr. Vincent, who thought it right to take the islands to make good the expense incurred by the United States. Next meeting with Mr. and Mrs. John Gamble.

Oakland Co.

COR. SEC.

SALEM FARMERS' CLUB.

At the home of Rev. O. M. Thresher the club was entertained October 7. After the usual opening exercises, Mr. Charles Kingsley, in an informal, extemporaneous talk, gave us some good advice on politics. Thought it well to tell our legislators that if they do not do their duty they will not be sent there again. He quoted the Scripture, "To them that hath shall be given, and from them that hath not shall be taken even that which they have." He thought it applied with special force to the farmers of the present time.

A committee appointed at the last meeting to ascertain the views of the candidates on taxation gave a report through Chairman Thompson, to the effect that the candidates for the legislature in his district were in favor of

equal taxation. Mr. Kingsley was called upon and gave a talk on the results of the war. Thought no country but ours could have accomplished so much with so little. It is simply typical of American educated manhood. Rev. Coffin thinks we have broken from a policy of one hundred and twenty years' standing and entered the arena with the older nations of the earth to hew out a God-given destiny. His remarks were of especial interest. The editor of the Ann Arbor Argus, being called upon, spoke on the commercial aspect of the war. Thought it would result in greater commercial activity and afford a larger scope for the activities of the American people. Club meets in November with Mr. and Mrs. Kingsley.

Oakland Co. C. L. ROSS, Cor. Sec.
COLUMBUS FARMERS' CLUB.

Club was entertained at the home of President John Schoof, September 28. An excellent talk on "The Care of the Dairy" was given by Mrs. Chas. Wheeler. Where more than twelve cows are kept she would prefer the separator, but where the means are limited the cabinet creamery, and last of all, deep setting. Clayton Fuller's opinion of the best breed of hogs was that breed the individual farmer liked to care for best. A lively discussion followed. The viewing committee reported everything in good order. Our club is gradually growing, three new members being received at this meeting. Club next meets at the home of Mr. Bert Quick.

St. Clair Co. MRS. BERT QUICK, Cor. Sec.
GENOA FARMERS' CLUB.

The October meeting was held at the pleasant home of Mr. and Mrs. J. Haller, the 1st inst. Despite the threatening weather a goodly crowd gathered and spent a profitable time. Promptly after dinner the club was called to order and after the usual opening exercises Mrs. Cyrus Sweet read a well prepared paper on "Farm Life." Health is heaven's own blessing and is more easily secured in the country where the air is fragrant with the perfume of flowers than in the crowded city. In the discussion of the Association question the talk was principally along the line of equal taxation. Resolutions were adopted on the death of Mrs. T. J. Conely. November meeting with Mr. and Mrs. Lewis Fitch.

MRS. M. E. DUNNING, Cor. Sec.
Livingston Co.

TYRONE FARMERS' CLUB.

One of the most interesting meetings of our club was held at the home of Wm. Pearson, October 8. In the discussion of the question, "The farmers' duty regarding the nomination and election of members of the legislature and of congress," it was the general opinion that there should be more interest taken in the caucuses and conventions. J. C. Carner led the discussion of the Association question of Equal Taxation. The candidates for offices that had been consulted by our committee, on the question of equal taxation all reported favorably but one which had not been heard from. Visitors were present from Fenton and Highland and Hartland Clubs. On November 12 the club again meets at the home of E. J. Wakeman.

Livingston Co. COR. SEC.
MAPLE RIVER FARMERS' CLUB.

The regular monthly meeting was held September 29 at the home of Mr. and Mrs. C. E. Fuller. A pleasant meeting was enjoyed by all, and an interesting program was carried out.

The Association question was assigned to P. B. Reynolds, who is in favor of the County Salary Bill, and treated the subject something as follows: The measure is a just one and should become a law; a change in the compensation of the county officials is demanded as a business measure; it is right that the affairs of the county should be conducted on business principles; it is right that the voters and taxpayers should know what they are compelled to pay in order to support the county officers and their offices; in private matters men know what they are paying and what they are being paid; the same should be equally true in public affairs. The only practical means of conducting these affairs is to pay a stated salary, and put all fees into the public treasury.

E. J. Cook is thoroughly in sympathy with the measure, and believes that it should become a law, which we feel confident will be the case. The county officials do not want it, hence their organized opposition to the proposed measure.

Mr. J. A. Armstrong is also in favor of the bill. He believes that the coun-

ty officials are receiving more compensation than they are willing to admit. He believes that the measure will be the means of reducing taxes to some extent at least. It is safe to say that the club to a member are in favor of the bill, and are anxious to have it become a law. The next meeting of the club will be held with Mr. and Mrs. Wm. Gladden, October 27th.

Shiawassee Co. C. P. REYNOLDS.
WEBSTER OF OAKLAND FARMERS' CLUB.

At the last meeting Mr. Bump offered a resolution to the effect that we form a county association. This being adopted it was further arranged that the meeting for the purpose of organizing should be called at the Court House in the city of Pontiac on November 15, 1898; also that the secretary should notify all the clubs in the county of the meeting and request them to elect two delegates to attend the same. In support of the above idea Mr. Bump made the following remarks: I believe there is a choice of two things for us to do. One is what we are now doing, to do nothing but grow and kick about the other fellow and our taxes. The other is to organize and work for justice and right all along the line. I believe there should be a county association of clubs in Oakland county. The legislature will soon be in session and any request we may make of it will be very much more effective if it comes from all the clubs in the county through a county organization, than from separate clubs. Then shall we get the Kimmis bill or something better enacted into a law and we shall be in position to all work together in trying to get justice, right and economy practiced in our county affairs. At the next meeting, in addition to the Association topic, the club will discuss, "City Life vs. Country Life."

MRS. T. SEAMARK, Cor. Sec.
Oakland Co.

PUTNAM AND HAMBURG FARMERS' CLUB.

The September meeting was held at the pleasant home of John Van Fleet, Sr. Although an unfavorable morning there were a goodly number present. Aside from the regular literary program the Association question for the month, "The County Fee System," was thoroughly discussed. The general opinion was that the county officers should receive salaries but no fees. Some thought the fees should be charged just the same but should be turned into the county treasury. The talk was so thorough in regard to this question that the club passed the following resolution:

Resolved, that we will not vote for any man who will not pledge himself to support the terms of the Atkinson bill and also the Kimmis bill. The president appointed a member to correspond with our candidates and demand a direct answer regarding these important questions. As our next meeting occurs but a few days before election the voters desire to know for whom to cast their ballots. The farmers are now awake to the fact that if ever a portion of the laws favor them they must work for their enactment.

It was a most pleasant and profitable meeting. The October session will be held with G. W. Brown.

Livingston Co. REPORTER.

The Poultry Yard.

For The Michigan Farmer.

SOME QUERIES ANSWERED.

A subscriber at Belle River asks the question, "Are cooked apples good for poultry when mixed with other food?" We should think not, as if fed for any length of time they would cause diarrhoea, and any feed which will cause this disease should be left out of a ration for poultry.

We cannot be too careful at this season of the year of what we feed. We should also feed new corn sparingly at first, as this will also cause diarrhoea, and this many farmers call cholera; but it is not—only too much new corn. Feed a little bran mixed with hot water, with some kind of condition powders in it, three times a week, and be sure to keep the coops clean. If one does this he will have little cause for complaint.

CANCEROUS TUMORS.

I. M. D. Perry, Shiawassee Co., writes: "What ails my hens? There are large tumors upon the neck and head; they seem to be loose in the skin, but continue to grow, and in a few days the bird dies. He also asks is there any remedy? We say no, except to kill the bird as soon as it shows any symptoms of this disease.

It is of a cancerous nature and cannot be cured. He should feed his birds plenty of good, wholesome food, and give cooked food twice a week; also put tincture of iron in the drinking water; a teaspoonful to a pail of water, and let them have no other to drink for a few weeks. Keep their houses and yards (if kept in yards) clean. We do not think the disease contagious, but it seems to affect the flock more or less when it gets started. We were troubled with it some years ago, and we killed the birds as soon as they showed any symptoms of disease or any sores upon them, and we soon had it all out of our flock.

C. L. HOGUE.

CALHOUN COUNTY FAIR.

We have just returned from our county fair, which was a great success. We had fine weather, and the largest attendance ever on the fair ground. The exhibits were grand and very large. One thing we missed greatly, and that was our superintendent of poultry, he being at the State Fair, which was held the same week. There was a man who had been appointed by him to look after the poultry exhibit. This man did not know one bird from another, was very rough and profane, and disgusted all who came in contact with him. This was something we were not used to.

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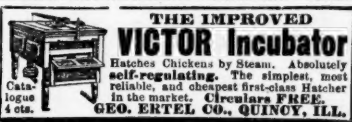
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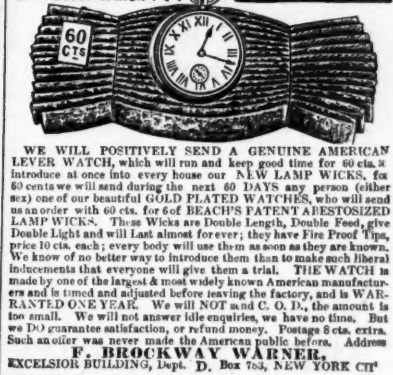
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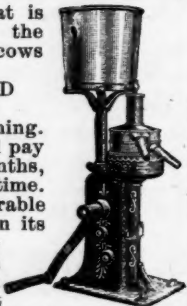
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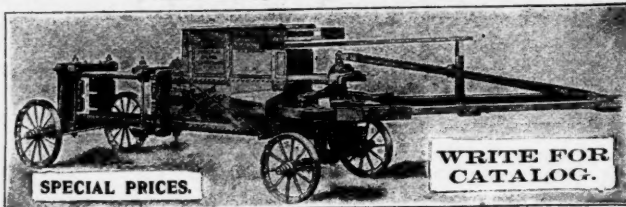
consists in grinding the grain so that no part of it will escape mastication and digestion by the animal to which it is fed. **SCIENTIFIC GRINDING MILLS...** are world beaters as feed preparers; grind all grains simply or mixed; they crush corn cob and all, and turn it into meal. The prices are right. It will pay you to get our prices and catalogue before buying. **THE FOOS MFG CO. Springfield, Ohio.**



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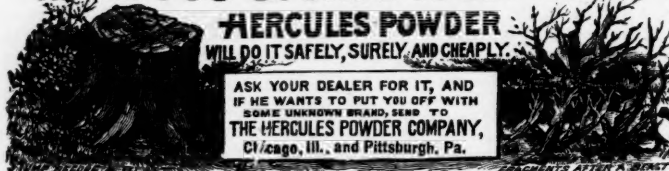
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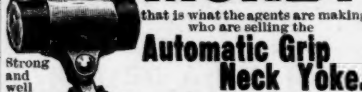
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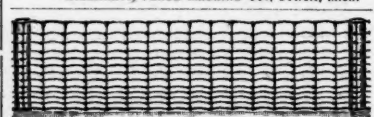
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